APPENDICES

APPENDIX A

FEDERAL REGISTER NOTICES

Commission solicits written comments concerning the petition.

DATES: The Office of the Secretary must receive comments on the petition by December 17, 2002.

ADDRESSES: Comments, preferably in five copies, on the petition should be mailed to the Office of the Secretary, Consumer Product Safety Commission, Washington, DC 20207, telephone (301) 504–0800, or delivered to the Office of the Secretary, Room 501, 4330 East-West Highway, Bethesda, Maryland 20814. Comments may also be filed by telefacsimile to (301) 504–0127 or by email to *cpsc-os@cpsc.gov.* Comments should be captioned ''Petition CP–02–4/HP–02–1, Petition on ATVs.'' A copy of the petition is available for inspection at the Commission's Public Reading Room, Room 419, 4330 East-West Highway, Bethesda, Maryland.

FOR FURTHER INFORMATION CONTACT: Rockelle Hammond, Office of the Secretary, Consumer Product Safety Commission, Washington, DC 20207; telephone (301) 504–0800, ext. 1232.

SUPPLEMENTARY INFORMATION: The Commission has received correspondence from Consumer Federation of America (''CFA'') and other groups [1] requesting that the Commission take several actions concerning all-terrain vehicles (''ATVs''). The Commission is docketing their request for a ban of the sale of adult-size four wheel ATVs sold for the use of children under 16 as a petition under the Consumer Product Safety Act, 15 U.S.C. 2057, and the Federal Hazardous Substances Act, 15 U.S.C. 1261(q)(1)(A). The petitioners assert that ATVs pose an unreasonable risk of injury and death to children. They cite Commission data that between 1982 and 2001 there were reports of 4,541 ATV-related deaths, and that 1,714 (or 38%) of those deaths were children under 16 years old. They also note that in the year 2001, there were 111,700 people taken to emergency rooms for ATV-related injuries, of which 34,800 were under 16 years old. They argue that there is no feasible standard that would address the risks ATVs pose to children.

Interested parties may obtain a copy of the petition by writing or calling the Office of the Secretary, Consumer Product Safety Commission, Washington, DC 20207; telephone (301) 504–0800. Copies of the petition are also available for inspection from 8:30 a.m. to 5 p.m., Monday through Friday, in the Commission's Public Reading Room, Room 419, 4330 East-West Highway, Bethesda, Maryland.

Dated: October 10, 2002.

Todd Stevenson,

Secretary, Consumer Product Safety Commission.

[FR Doc. 02–26458 Filed 10–17–02; 8:45 am]

BILLING CODE 6355–01–P

[1] The other groups are the American Academy of Pediatrics, the American College of Emergency Physicians, Bluewater Network, the Center for Injury Research and Policy, the Danny Foundation for Crib and Child Product Safety, Kids in Danger, National Association of Orthopaedic Nurses, and U.S. PIRG.

CONSUMER PRODUCT SAFETY COMMISSION

Sunshine Act Meeting

TIME AND DATE: Thursday, October 24, 2002, 10 a.m.

LOCATION: Room 420, East West Towers, 4330 East West Highway, Bethesda, Maryland.

STATUS: Open to the public.

MATTER TO BE CONSIDERED:

Petition HP 99–1 Polyvinyl Chloride (PV)

The staff will brief the Commission on Petition HP 99–1 requesting a ban of polyvinyl chloride (PVC) in all toys and other products intended for children five years of age and under.

For a recorded message containing the latest agenda information, call (301) 504–0709.

CONTACT PERSON FOR ADDITIONAL INFORMATION: Todd A. Stevenson, Office of the Secretary, 4330 East West Highway, Bethesda, MD 20207 (301) 504–0800.

Dated: October 15, 2002.

Todd A. Stevenson,

Secretary.

[FR Doc. 02–26730 Filed 10–16–02; 8:45 am]

BILLING CODE 6355–01–M

DEPARTMENT OF DEFENSE

Department of the Air Force

Notice of Intent To Prepare an Environmental Impact Statement for Proposed Aircraft Conversion at Martinsburg, WV

Pursuant to the National Environmental Policy Act (NEPA) of 1969, as amended (42 United States Code 4321, *et seq.*), the Council on Environmental Quality (CEQ) Regulations for implementing the procedural provisions of NEPA (40 Code of Federal Regulations (CFR) parts 1500–1508), and Air Force policy and procedures (32 CFR part 989), This announcement provides notice that the Air Force proposes a conversion of C–130 aircraft to C–5 aircraft along with associated actions to meet strategic airlift requirements of the U.S. Air Force and Air National Guard. This action requires a unique mix of facilities and support capabilities associated with the C–5, the largest cargo aircraft in the Department of Defense inventory. The eventual receiving location would maintain and operate an inventory of 10 C–5 aircraft.

The Air National Guard is preparing an EIS to assess potential environmental impacts associated with the proposed conversion from C–130 to C–5 aircraft at the 167th Airlift Wing (167 AW), Martinsburg, WV. The 167th AW action would consist of three primary components: (1) Conversion from C–130 to C–5 aircraft; (2) acquisition of land through lease; from the Eastern West Virginia Airport and (3) construction of both ANG and the Eastern West Virginia Regional Airport facilities on existing and acquired parcels. The EIS will address alternatives to the proposed action, including alternative facilities development scenarios, reduced airfield expansion, and the No Action Alternative.

The ANG will initiate a public scoping process to facilitate identification of the relevant scope of environmental issues to be addressed in the EIS. The public will be invited to participate in scoping meetings and review the Draft EIS. Notification of the meeting locations and time will be made in the local area and will be announced via local news media. Information gathered during the public scoping will be used in the development of the Draft EIS.

For Further Information Contact: ANG/CEVP, Martinsburg EIS, Attention: Lt Col TJ Mitnik, 3500 Fetchet Avenue, Andrews Air Force Base, MD 20762.

Pamela D. Fitzgerald,

Air Force Federal Register Liaison Officer.

[FR Doc. 02–26604 Filed 10–17–02; 8:45 am]

BILLING CODE 5001–05–P

DEPARTMENT OF ENERGY

Office of Energy Efficiency and Renewable Energy

Biomass Research and Development Technical Advisory Committee

AGENCY: Department of Energy.

ACTION: Notice of open meeting.

SUMMARY: This notice announces an open meeting of the Biomass Research and Development Technical Advisory Committee under the Biomass Research

APPENDIX B

IICEP COORDINATION

Preliminary IICEP Distribution List
West Virginia Air National Guard
Environmental Impact Statement

Berkeley County Historical Society
P.O. Box 1624
Martinsburg, WV 25402

Steve Teufel
President of County Commission
119 West King Street, Meeting Room #7
Martinsburg, WV 25401

Berkeley County Development Authority
Bob Crawford, Director
110 West Burke Street
P.O. Box 2448
Martinsburg, WV 25402

Berkeley County Farmland Protection Board
P.O. Box 1243
Martinsburg, WV 25402

John Overington
54th District House of Delegates
491 Hoffman Road
Martinsburg, WV 25401

West Virginia Air Quality Board
1615 Washington Street East, Suite 301
Charleston, WV 25311-2126

West Virginia Division of Culture and History
The Cultural Center Capitol Complex
1900 Kanawha Boulevard East
Charleston, WV 25305-0300

West Virginia Board of Architects
P.O. Box 589
Huntington, WV 25710-0589

West Virginia Bureau of Commerce
90 MacCorkle Avenue South West
Charleston, WV 25303

West Virginia Division of Forestry
1900 Kanawha Boulevard
East Charleston, WV 253035-0180

West Virginia Department of Geological and Economic Survey
P.O. Box 879
Morgantown, WV 26507-0879

West Virginia Division of Natural Resources
State Capitol Complex, Building 3
Room 669
1900 Kanawha Boulevard
Charleston, WV 25305-0060

West Virginia Water Development Authority
180 Association Drive
Charleston, WV 25311-1217

Senator Robert C. Byrd
311 Hart Building
Washington D.C. 20510

Senator Robert C. Byrd
300 Virginia Street, Suite 2630
Charleston, WV 25301

Senator Jay Rockefeller
225 West King Street, Suite 307
Martinsburg, WV 25401

Senator Jay Rockefeller
531 Hart Senate Office Building
Washington D.C., 20510

The Honorable Shelley Moore Capito
1431 Longworth House Office Building
Washington D.C., 20515

The Honorable Shelley Moore Capito
222 West John Street
Martinsburg, WV 25401

Preliminary IICEP Distribution List
West Virginia Air National Guard
Environmental Impact Statement

West Virginia Division of Air Quality
7012 MacCorkle Avenue, South East
Charleston, WV 25304

Allyn Turner, Director
Division of Water Resources
1201 Greenbrier Street
Charleston, WV 25311-1088

West Virginia Environmental Quality Board
1615 Washington Street East, Suite 301
Charleston, WV 25311-2126

Fred Vankirk, P.E.
Secretary/Commissioner
West Virginia Dept of Transportation
Building 5
1900 Kanawha Boulevard E
Charleston, WV 25305

Governor Bob Wise
1900 Kanawha Boulevard, East
Charleston, WV 25305

West Virginia Division of Natural Resources
State Capitol, Building 3 Room 812
Charleston, WV 25305

West Virginia Division of Natural Resources
Wildlife, District 2
1 Depot Street
Romney, WV 26757-1400

West Virginia Soil Conservation Agency
Eastern Panhandle Conservation District
1450-1 Edwin Miller Boulevard
Martinsburg, WV 25401

Natural Resources Conservation Services
Attention: Conservation Communications Staff
P.O. Box 2890
Washington, D.C. 20013

Natural Resources Conservation Service
1450 Edwin Miller Boulevard
Martinsburg, WV 25401-3739

Federal Highway Administration
West Virginia Division
700 Washington Street, East
Charleston, WV 25301

US EPA Region 3
1650 Arch Street
Philadelphia, PA 19103-2029

US Fish and Wildlife Service
West Virginia Field Office
694 Beverly Pike
Elkins, WV 26241

US Fish and Wildlife Service
Northeast Region
300 Westgate Center Drive
Hadley, MA 01035-9589

George H. Rodriguez
U.S. Department of Housing and Urban Development
West Virginia Field Office
405 Capitol Street, Suite708
Charleston, WV 25301-1795

Federal Emergency Management Agency
Region III
615 Chestnut Street
Philadelphia, PA 19106

Preliminary IICEP Distribution List
West Virginia Air National Guard
Environmental Impact Statement

U.S. Army Corps of Engineers
Baltimore District
P.O. Box 1715
Baltimore, MD 21203-1715

U.S. Army Corps of Engineers
Pittsburgh District
1000 Liberty Avenue
Pittsburgh, PA 15222-4186

William E. Walkup, Airport Manager
Eastern West Virginia Regional Airport
180 Aviation Way, Suite A
Martinsburg, WV 25401

Larry Clark
Federal Aviation Administration
Beckley Airports District Office
176 Airport Circle, Room 101
Beaver, WV 25813

Daisy Mather
Federal Aviation Administration
Eastern Region Airports Division,
AEA-610
One Aviation Plaza
Jamaica, NY 11434

Sue Ann Morgan
Planning Director
Berkeley County Planning Commission
126 W. King Street
Martinsburg W. Va. 25401

Mike Keller
Bowles Rice McDavid Graff & Love
PLLC, 105 W Burke Street,
Martinsburg WV 25401

Senator Herb Snyder
PO Box 400
Shenandoah Junction, WV 25442

Senator John R. Unger, II
PO Box 2415
Martinsburg WV 25402

Honorable Charles S. Trump, IV
Member House of Delegates
171 South Washington Street
Berkeley Springs WV 25441

Honorable Craig P. Blair
Member House of Delegates
167 Wasser Drive
Martinsburg WV 25401

Honorable Larry V. Faircloth
8274 Winchester Avenue
Inwood WV 25428
Member House of Delegates

Honorable John Overington
Member House of Delegates
491 Hoffman Road
Martinsburg WV 25401

Honorable John Doyle
Member House of Delegates
127 Sandpiper Lane
Shepherdstown WV 25443

Honorable Dale Manuel
Member House of Delegates
104 Porter Way
Charles Town WV 25414

Honorable Walter E. Duke
Member House of Delegates
112 Tavern Road
Martinsburg WV 25401

Honorable Robert C. Tabb
Member House of Delegates
1870 Darke Lane
Kearneysville WV 25430

DEPARTMENT OF THE ARMY
PITTSBURGH DISTRICT, CORPS OF ENGINEERS
WILLIAM S. MOORHEAD FEDERAL BUILDING
1000 LIBERTY AVENUE
PITTSBURGH, PA 15222-4186

REPLY TO
ATTENTION OF:

July 31, 2003

Operations and Readiness Division
Regulatory Branch
200200609

Paul A. Henry, Captain, WVANG
Deputy Base Civil Engineer
Headquarters, 167th Airlift Wing (AMC)
222 Sabre Jet Blvd.
Room 107
Martinsburg, West Virginia 25401

Dear Captain Henry:

I refer to your memo dated July 1, 2003, regarding the proposal to expand and improve airport facilities to accept C-5 aircraft at the Eastern West Virginia Regional Airport, located near Martinsburg, Berkeley County, West Virginia.

The Air National Guard plans to include an articially constructed pond (less than 0.1 acre), into the storm water detention basin. This pond is exempt from regulation and, therefore, the detention basin work does not require any authorization from this office.

In addition, utility line crossings would be constructed across drainage ditches and other headwater streams, as a part of the airport expansion. These types of activities, utility line crossings, are authorized by Nationwide Permit No. 12 (see enclosure), previously issued by the Corps of Engineers for purposes of Section 404 of the Clean Water Act, as published in the January 15, 2002 issue of the Federal Register.

The enclosed Public Notice provides a list of conditions which must be followed for the Nationwide Permit to be valid. Adherence to these conditions will permit you to proceed with the proposed project. **Please Note**, the attached Compliance Certification Form must be signed and returned to this office upon completion of the proposed work.

The verification of this Nationwide Permit is valid until July 30, 2005 unless the Nationwide Permit is modified, suspended, or revoked. If project specifications are changed or work has not been initiated before July 30, 2005, please contact this office for further approval.

The issuance of this Nationwide Permit will not relieve you of the responsibility to obtain any other required state, local, or Federal authorizations.

If you have any questions, please contact Mr. Richard Sobol at (412) 395-7153.

Sincerely,

Albert H. Pogalla
Chief, Regulatory Branch

Enclosure

STATE OF WEST VIRGINIA
OFFICE OF THE GOVERNOR
CHARLESTON 25305

BOB WISE
GOVERNOR

November 25, 2003

Eastern West Virginia Regional Airport Authority
180 Aviation Way
Martinsburg, West Virginia 25401

Gentlemen:

The Adjutant General has informed me that funding for potential Noise Mitigation issues has delayed the Environmental Impact Study process relating to the 167th Airlift Wing's conversion from C-130 to C-5 aircraft. Let me assure you that should Noise Mitigation issues arise, and appropriate sources of federal funding cannot be arranged, the State of West Virginia would be committed to appropriate necessary funs for mitigation purposes.

I stand in full support of the planned mission change at the 167th Airlift Wing and encourage you to expeditiously work any outstanding issue, which could delay completion of the Environmental Impact Study.

Very truly yours,

Bob Wise
Governor

BW/lc

The Senate of West Virginia
Charleston

JOHN R. UNGER II
P. O. Box 2415
Martinsburg 25402

Phone: (304) 263-5488
Fax: (304) 267-8270

COMMITTEES:
Small Business (Vice Chair)
Agriculture
Education
Finance
Health and Human Resources
Interstate Cooperation
Rule-Making Review

August 25, 2003

Major General Allen E. Tackett
West Virginia Adjutant General
1703 Coonskin Drive
Charleston, West Virginia 25311-1085

Dear General Tackett:

I'm writing regarding the C-5 conversion process for the 167th ANG expansion, of which I am in full support.

As you know, the 167th ANG provides approximately $2 million dollars annually in services to the Eastern West Virginia Regional Airport in Berkeley County. These funds would be extremely difficult, if not impossible, to replace. As you know, the joint use airport concept has worked very well over the years and positioned the airport to rapidly move forward in the areas of general aviation, industrial expansion, and possible regional commercial air service.

There is considerable support from the general public of the 167th ANG expansion, which is recognized as having been an important part of the industrial community. Additionally, it is a major employer, with nearly 1,200 full and part time jobs. The C-5 conversion will only increase job significantly.

The Berkeley County Commission, the Eastern West Virginia Regional Airport Authority, and the Berkeley County Planning Commission are reviewing the situation daily to determine how best to correct the problems now and plan for the future. So as you can see, I believe that the local issues are being handled fairly and competently by local authorities.

Accordingly, General Tackett, it is important that this project continue. I am hopeful that the noise mitigation and related issues will be resolved quickly so that this project can move forward.

If you or any of your staff have any questions regarding my support for this project, or would like to discuss the project with me. Please feel free to do so at any time.

With best wishes and kind regards.

Very truly yours,

John R. Unger II

John R. Unger II
Senator, Sixteenth District

cc: Rick Wachtel
Col. Jesse Thomas

HOUSE OF DELEGATES
WEST VIRGINIA LEGISLATURE

BUILDING 1, ROOM M-472
1900 KANAWHA BLVD., EAST
CHARLESTON, WV 25305-0470
PHONE (304) 340-3280

JOHN DOYLE, Vice-Chair
COMMITTEE ON FINANCE
BOX 1607
SHEPHERDSTOWN, WV 25443
PHONE: (304) 876-6472 HOME
(304) 876-1648 OFFICE

Committees:
Veterans' Affairs
Interstate Cooperation

August 29, 2003

Major General Allen E. Tackett
TAG/WV
1703 Coonskin Drive
Charleston, West Virginia 25311-5000

Dear General Tackett:

You are to be congratulated on your efforts to bring the C5 aircraft to the Martinsburg Air National Guard base. This move will be of great importance to the entire Eastern Panhandle.

Please continue to do everything in your power to see that the move is finally accomplished and soon.

Sincerely,

John Doyle 9/4/03

John Doyle

prefers interim mail April through December at home address

HOUSE OF DELEGATES
WEST VIRGINIA LEGISLATURE

BUILDING 1, ROOM R-150
1900 KANAWHA BLVD., EAST
CHARLESTON, WV 25305-0470
PHONE (304) 340-3151

WALTER E. DUKE
112 TAVERN RD
MARTINSBURG, WV 25401
PHONE: (304) 263-1808
EMAIL: wduke@mail.wvnet.edu

Committees:
Education
Agriculture & Natural Resources
Political Subdivisions
Pensions & Retirement

August 23, 2003

Major General Allen E. Tackett, TAG/WV
1703 Coonskin Drive
Charleston, WV 25311-5000

Dear Sir:

Please accept this letter supporting the C-5 conversion plans for the 167th ANG located at the Eastern Regional Airport in Berkeley County. I want to assure you that the Eastern Panhandle delegation in the WV Legislature is very supportive of the proposed expansion and conversion plans.

The 167th ANG has been an important economic asset and integral component of the Eastern Panhandle economy. The ANG is a major employer in this part of the state, providing full or part-time employment for nearly 1200 individuals. The ANG's presence at the Eastern WV Regional Airport has done much to enhance and maintain our Regional airport and is a critical component in making Berkeley County attractive for future industrial growth.

The citizens of the Eastern Panhandle have always held the ANG operation here in high regard and are very appreciative of the ANG's long history of community service in our region. The general public's support for the C-5 conversion and airport expansion plans remains strong.

It is of utmost importance that the noise mitigation issue does not sidetrack the C-5 conversion and airport expansion plans. Local county officials are committed to doing their part in helping to deal successfully with noise mitigation concerns. It is critical that we continue to be able to maintain our "joint use airport" and that the plans to upgrade the airport will undoubtedly be of great benefit to both the ANG as well as to the economic vitality of this part of our state.

Please let me know if I may be of service to you regarding the C-5 conversion/airport expansion plans.

Sincerely,

Walter E. Duke

Walter E. Duke
WV House of Delegates, 54th District

County Commission of Berkeley County

126 WEST KING STREET
MARTINSBURG, WEST VIRGINIA 25401
PHONE (304) 264-1923

THE COMMISSION

HOWARD L. STRAUSS, COMMISSIONER
POST OFFICE BOX 1812
MARTINSBURG, WEST VIRGINIA 25402

STEVEN C. TEUFEL, COMMISSIONER
POST OFFICE BOX 1050
MARTINSBURG, WEST VIRGINIA 25402

JOHN E. WRIGHT, COMMISSIONER
POST OFFICE BOX 357
BUNKER HILL, WEST VIRGINIA 25413

DEBORAH HAMMOND
COUNTY ADMINISTRATOR

SHERRY A. GAIN
ADMINISTRATIVE SECRETARY

21 August 2003

Colonel Jesse Thomas
222 Saber Jet Blvd.
Martinsburg, WV 25401

Dear Colonel Thomas:

The Berkeley County Commission is pleased to issue this letter of proposed action with regards to planned improvements at the 167th Airlift Wing National Guard base and Eastern West Virginia Regional Airport at Martinsburg, West Virginia.

Base Engineer Billy Burkhart has informed the County Commission of comprehensive redevelopment plans for the Martinsburg base and airport. These plans feature construction of several new buildings, which include a base operations center, aircraft hangers, a flight operations building, a supply warehouse, a flight simulator building and a new base headquarters. A phased lengthening of the east-west runway is also proposed. Phase I will extend the runway length from 7000 feet to 8000 feet, while phase II contemplates an additional runway extension, to be dictated by future aircraft requirements. Other planned improvements include construction of a jet fuel tank storage area and the creation of a series of airplane ramps and airplane parking areas. Taken as a whole, these improvements will ensure the continued viability of the Martinsburg base. The runway expansion, in particular, will allow the base to accommodate the C-5 military cargo airplane. This accommodation is central to base's future economic well being, and will in turn permit the 167th Airlift Wing Unit's continued and extensive support of essential non-military operations at the Eastern West Virginia Regional Airport.

The County Commissioners both acknowledge and appreciate the significant role which the 167th Airlift Wing Unit plays in our strong local economy. Indeed, it is through their continued commitment of human, technological and financial resources that our community enjoys the service and convenience of a regional airport. However, we wish to emphasize that our high regard for the 167th Airlift Wing Unit is not premised upon financial considerations alone. Rather, we value the excellent citizenship and generosity of spirit which its members have consistently demonstrated throughout their 50-plus year residency in Berkeley County. In addition to highly effective participation in mutual aid agreements with the County and the City of Martinsburg, the men and women of the local Air National Guard are among our community's most willing, able and frequent volunteers in virtually all imaginable service areas. We are fortunate to have such a public spirited organization within our community.

Lieutenant Colonel Burkhart has further advised us that due to the larger aircraft which the expanded runway will accommodate, measures will need to be taken to exclude residential land uses from prescribed "zones of noise influence" adjacent to the airport. While our current airport zoning district regulations do not contemplate such prohibitions, please be informed that we intend to amend our local code to include provisions to this effect.

In addition to the aforementioned County Code amendments, please know that the Berkeley County Development Authority's current land acquisition program also supports the growth agenda of the Air National Guard and Eastern West Virginia Regional Airport. The Development Authority is in the process of purchasing a 219 acre parcel which is located adjacent to the airport. This parcel will be taken out of the County's inventory of available residential lands and will instead be marketed for industrial purposes only. This development scheme is compatible with the base's planned expansion, as aircraft noise levels are not subject to mitigation in an industrial area.

Once again, it is our pleasure to issue this letter confirming both our full support for the base and airport development plans described herein as well as our intent to advance and adopt any necessary supporting amendments to the Berkeley County Code.

Best regards,

Honorable Howard L. Strauss,
Commission President

Honorable Steven C. Teuful, Commissioner

Honorable John E. Wright, Commissioner

Cc: Richard Wachtell
180 Aviation Way
Suite A
Martinsburg, WV 25401

CITY OF MARTINSBURG
OFFICE OF THE MAYOR
232 NORTH QUEEN STREET · P.O. BOX 828
MARTINSBURG, WEST VIRGINIA 25402
PHONE (304) 264-2140

August 28, 2003

Major General Allen E. Tackett
TAG/WV
1703 Coonskin Drive
Charleston, WV 25311-5000

RE: 167th Air National Guard Expansion

Dear Major General Tackett:

On behalf of the City of Martinsburg, please accept this letter as the City's continued support of the 167th Air National Guard expansion of the C-5 conversion process. The City is aware and understands several issues are being reviewed, such as noise mitigation, and it is our hope the process of project planning continues to move forward.

The 167th ANG has been an important asset and employer in our community and the C-5 conversion project would allow new growth for the ANG as well as new jobs creation. The 167th ANG is well respected within the community for its relationships and community service.

Besides providing military operations, economic development and employment opportunities, the 167th ANG also provides vital services to the Eastern West Virginia Regional Airport. The joint use of the airport has worked well and has been of mutual benefit to the ANG and the EWVRA. The C-5 conversion project would allow for this cooperative arrangement to continue long term.

In closing, the City of Martinsburg appreciates your consideration of moving this important project forward as local issues are being resolved. If you have any questions, please call.

Sincerely,

George Karos

George Karos
Mayor

GK/djd

cc: City Council
Mark S. Baldwin, City Manager
Mr. Rick Wachtel, Chairman, Eastern WV Regional Airport Authority
Mr. Bill Walkup, Director, Eastern WV Regional Airport Authority

DEPARTMENT OF THE ARMY
PITTSBURGH DISTRICT, CORPS OF ENGINEERS
WILLIAM S. MOORHEAD FEDERAL BUILDING
1000 LIBERTY AVENUE
PITTSBURGH, PA 15222-4186

REPLY TO
ATTENTION OF:

April 25, 2002

Operations and Readiness Division
Regulatory Branch
200200609

Ms. Galina Fet
H.C. Nutting Co.
912 Morris
Charleston, West Virginia 25301

Dear Ms. Fet:

I refer to your April 25, 2002 facsimile regarding the proposed runway extension # 91040.074 at the Eastern West Virginia Regional Airport near Martinsburg in Berkeley County, West Virginia.

We have reviewed the data sheets and information you submitted to this office. Based on this review and your telephone conversations with my project manager, Mr. Richard Sobol, we have determined that no jurisdictional wetlands will be affected by the proposed project. This office has no objection to the proposed activity and a Department of the Army Permit is not required.

You may begin the work after you have received any required State and local permits. In the event that the project scope changes such that Waters of the United States would be affected, this office must again be notified to determine permit requirements.

If you have any questions, please contact Mr. Sobol at: (412) 395-7153.

Sincerely,

Richard S. Sobol

Albert H. Rogalla
Chief, Regulatory Branch

DIVISION OF NATURAL RESOURCES
Wildlife Resources Section
Operations Center
P.O. Box 67
Elkins, West Virginia 26241-3235
Telephone (304) 637-0245
Fax (304) 637-0250

Bob Wise
Governor

Ed Hamrick
Director

April 19, 2001

Mr. William D. Hunt
H.C. Nutting Company
912 Morris Street
Charleston, WV 25301

Dear Mr. Hunt:

We have reviewed our files for information on rare, threatened and endangered (RTE) species, wetlands, critical habitats, and wilderness areas and preserves for the areas of the following airports:

Eastern West Virginia Regional Airport, Berkeley County
Upshur County Airport, Upshur County
Mason County Airport, Mason County
Elkins-Randolph County Airport, Randolph County

We have no known records of any RTE species, critical habitats, or wilderness areas and preserves within the project areas. There are wetlands in the vicinities of the Eastern West Virginia Regional, Mason County, and Elkins-Randolph County airports (see enclosed National Wetland Inventory maps).

The Wildlife Resources Section knows of no surveys that have been conducted in the area for rare species or rare species habitat. Consequently, this response is based on information currently available and should not be considered a comprehensive survey of the area under review.

Enclosed please find an invoice, and copies of the Martinsburg, Elkins, Adrian and Cheshire National Wetland Inventory maps.

Chamber of Commerce
of Martinsburg and Berkeley County

BOARD OF DIRECTORS

RESOLUTION R03-3

WHEREAS, the Chamber of Commerce of Martinsburg and Berkeley County recognizes that aviation noise issues for the surrounding community are a concern at the Eastern West Virginia Regional Airport in Martinsburg; and,

WHEREAS, the Chamber of Commerce of Martinsburg and Berkeley County recognizes that the Berkeley County Commission and Berkeley County Planning Commission are rapidly taking steps to reduce and eliminate these issues in the future through increased regulation; therefore,

BE IT RESOLVED that the Chamber of Commerce of Martinsburg and Berkeley County supports the conversion of the 167th Air National Guard from a C-130 base to a C-5 base and our Senators and U.S. Representatives to urge the Department of Defense and Guard Bureau to continue the funding stream for the C-5 conversion without interruption.

Adopted by the Board of Directors of the Chamber of Commerce of Martinsburg and Berkeley County, Inc., in meeting assembled December 10, 2003, with a quorum present.

Susan G. Sanders
SUSAN G. SANDERS, BOARD SECRETARY

Amy C. Fansler
ATTEST

12-10-03
DATE

198 Viking Way - Martinsburg, WV 25401 • 304.267.4841 • fax 304.263.4695 • e-mail chamber@berkeleycounty.org

APPENDIX C

GENERAL COORDINATION LIST

WRITTEN COMMENT FORM

11/7/02

ENVIRONMENTAL IMPACT ANALYSIS PROCESS (EIAP)
PROPOSED AIRCRAFT CONVERSION FOR THE WEST VIRGINIA AIR NATIONAL GUARD (WVANG)

If you would prefer to submit written comments on the Environmental Impact Statement (EIS), please use this form. Continue on the back of the form or attach extra sheets, as necessary. Please note the disclosure statement on the back of this form addressing registration and comments made during the EIS process.

NAME: Ronald G. Masters Jr.

TITLE/ORGANIZATION: Resident

ADDRESS: _____
(Street) (City/State/Zip)

—COMMENTS—

I feel the C-5 aircraft are too loud. I have a four-year-old son and when the aircraft files directly over our house he complains. And I feel that they fly entirely too low and I feel there is not enough room to house these aircraft. If it were not a residential area and the facility was larger it would be fine. I also feel that an expansion of the runway would bring in commercial aircraft and that would be 24 hour situation. I really don't want these aircraft there. If any problems arise I am very sure actions WILL BE TAKEN.

Please hand this form to the staff,
drop into the collection box, or mail to:

Air National Guard Readiness Center/CEVP
Lt Col TJ Mitnik, WVANG EIS
3500 Fetchet Avenue
Andrews AFB MD 20762-5157

WRITTEN COMMENT FORM

11/7/02

ENVIRONMENTAL IMPACT ANALYSIS PROCESS (EIAP)
PROPOSED AIRCRAFT CONVERSION FOR THE WEST VIRGINIA AIR NATIONAL GUARD (WVANG)

If you would prefer to submit written comments on the Environmental Impact Statement (EIS), please use this form. Continue on the back of the form or attach extra sheets, as necessary. Please note the disclosure statement on the back of this form addressing registration and comments made during the EIS process.

NAME: Daryl LaRusso

TITLE/ORGANIZATION: _____

ADDRESS: _____
(Street) (City/State/Zip)

—COMMENTS—

1) Since the frequency of take offs for the new planes will be significantly less than the current C130, then I would recommend that a single event take off noise contour be compared between C5 vs C130. This would be in addition to the average noise contour map.

2) Could you give us common comparable noises we experience day to day in terms of frequency (Hertz/Hz) and decibel (db) and compare them to C130 C5 contour map?

3) What is the frequency of take offs for C5s you anticipate and what margin of error is there in your estimate

4) Will you fly routine flights here or at another airport (i.e. Dover)

5) What will the flight pattern be and when will it be available to the public?

6) Is there a comparable EIS available done for another community for C5 introduction that we could see?

7) What would be the time frame of the conversion from 130 to C5? How quickly will the C130s be phased out?

8) What will be the time of day that these 50 take offs per month will occur?

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NAME: Deborah Hammond

TITLE/ORGANIZATION: County Administrator/Berkeley County Comm

ADDRESS: _____
(Street) (City/State/Zip)

—COMMENTS—

The proposed project is essential for long term growth of the military and civilian side of the Airport. The military and general aviation side of the Airport are essential to the economic development of Berkeley County. Both sides of the airport need to be expanded to preserve the integrity of aviation in Berkeley County.

The expansion of the WVANG is essential to address homeland security concerns in this area of West Virginia and for the nation's capital. We endorse the activities proposed for the WVANG and stand ready to assist in any manner possible.

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NAME: Stuart Brown

TITLE/ORGANIZATION: _____

ADDRESS: _____
(Street) (City/State/Zip)

—COMMENTS—

Where would the Engine Test Cells be located and where would the High Powered Engines Run take place?

Would there be any restrictions to time of day for Engine Runs?

What is the Decibel level of a C-5 at Takeoff Rated Thrust?

Would the C-5's that Martinsburg receive from the Active Duty be part of the re-engine program that is currently planned?

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NAME: Stephen W. Brown

TITLE/ORGANIZATION: _____

ADDRESS: _____
(Street) (City/State/Zip)

—COMMENTS—

I support change over to C-5A aircraft. I know them to be quieter and have less impact on the environment.

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WRITTEN COMMENT FORM

11/6/02

ENVIRONMENTAL IMPACT ANALYSIS PROCESS (EIAP)
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NAME: Roscoe Rauch

TITLE/ORGANIZATION: Private

ADDRESS: _____
(Street) (City/State/Zip)

—COMMENTS—

1) Primary – consider General Aviation (G.A) to keep north/south runways (17-35)

2) Secondary – extend 35 to the south approx. 1000' and have 17 begin just south of the air guard complex. Flight patterns for 17/35 can be adjusted to prevent any flyover of ANG complex.

Thank you.

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Andrews AFB MD 20762-5157

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11/6/02

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NAME: John Ellis

TITLE/ORGANIZATION: _____

ADDRESS: _____
(Street) (City/State/Zip)

—COMMENTS—

My concern, as a citizen of this area, is to understand the impact of the proposed conversion with respect to:
1) Impact on quality of life to residents from the perspective of noise and architecture
2) Impact on property values (in immediate and general area)
3) What impact on property values has occurred in airports that have undergone the conversion to C-5s (i.e., Ft Stewart)

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NAME: Jay Hurley

TITLE/ORGANIZATION: Private Pilot, EAA Chapter 1071

ADDRESS: _____
(Street) (City/State/Zip)

—COMMENTS—

I wish to voice concern at the loss of runway 17-35. Fellow pilots and I are flying conventional (tail wheel) aircraft which need an alternate crosswind runway when winds are not conducive to landing on 8-26.

Rearrangement of hangers and facilities for C5 may cost more but what price safety?

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[redacted]

Return Receipt Requested

CERTIFIED MAIL

7099 3400 0000 7528 9379

Air National Guard Readiness Center
/CEVP
Lt Col TJ Mitnik, WVANG EIS
3500 Fetchet Ave
Andrews AFB, MD 20762-5157

Date: December 2, 2002

From: James K. Newton
[redacted]

Subject: Proposed Aircraft Conversion for WVANG
At Martinsburg, WV, Airport

I am submitting these comments on behalf of myself as a pilot, aircraft owner and hangar owner operating out of the Martinsburg Airport. I fly routinely a Piper J3 Cub and the CAP Cessna 172 both based at MRB. However, I am a participating member of Experimental Aircraft Association's Chapter 1071 and the Martinsburg Composite Squadron, West Virginia Wing of the Civil Air Patrol. Both groups operate out of the Martingsburg (MRB) Airport. As members of both groups, I have benefited from the fine cooperation with the WVANG and I have no problem with operations of the WVANG current C130 aircraft. And I support the comments of EAA Chapter 1071 and the Aircraft Owners and Pilots Association, which I'm a member.

However, I take strong issue with the proposed closing of runway 35-17 at MRB for the following reasons:

1. SAFETY

There is an obvious need at MRB airport for a cross runway since the main runway 26-8 is not itself aligned with the prevailing winds from the northwest. MRB based small aircraft and especially tail-wheel aircraft will find it increasingly unsafe to attempt to land if only 26-8 is available. The risk of "ground loops" and other crosswind caused accidents will add to the risk of closing that runway temporarily for operations that could cause great expense to incoming aircraft. It just makes good common sense to "continue" to provide safe alternative runway for operation of light aircraft as is now available at MRB. Contrary to statements made by the ANG, runway 31-17 is used most often by light aircraft as opposed to using 26-8 even with light winds. Thus light aircraft stay out of the paths of larger aircraft using 26-8 for takeoff, approach and landing. This is perhaps one of greater benefit to safety than a crosswind option, especially during C5A aircraft operations.

2. GROWTH IN GRASSROOT AVIATION

As a Federally funded airport, MRB must make access available to all types of aviation. This is especially true for aviation activities that will inspire our youth, some of whom may join or make careers with the ANG. Currently I participate in providing orientation flights for CAP Cadets and "Young Eagle" introductory flights for kids at the MRB airport. This will be more difficult without the use of runway 35-17. But also, other activities with our young people will be hampered if not eliminated. I currently am a CAP Glider Orientation pilot, which means that I can introduce CAP Cadets to aviation

via rides in gliders. I have been doing this at a glider club at the Cumberland Airport. However these activities could mean that the National CAP will provide our WV Wing with a glider and tow-plane for use with these activities. We would like to operate at MRB. Glider operations at airports with cross-runways are ideal. One only needs to look at the operations at the Cumberland Airport that has cross-runways. It would be difficult to find glider procedures to operate at MRB as proposed but be assured, we would still press for use because of the Federal open access requirement. Why not have an airport where all operations are safely encouraged? It's good for the community and its young people, which would be good for the ANG.

3. CONSERVATION OF LANDUSE

If light aircraft operation is discouraged at MRB with the closing of 35-17, then there is no other public use airport in the Berkley Co./Jefferson Co. area for our operations to move to. One alternative will be to find private land for operations by forming small groups of pilots and aircraft owners. While this might maintain some freedom of flight for some, it just does not make sense to develop land when the current MRB facility will handle all types of aviation growth. Why make the MRB airport as haphazard in growth as other housing developments in the local counties? It makes economic and environmental land use sense to promote all aircraft operations at one location. And MRB currently has the runways to promote these operations. If the ANG wants to expand, they should find the additional land or means to do so and NOT at the expense of future operations for all airport users from the community.

Finally, no closing and destruction should happen to runway 35-17 before it is absolutely assured that all construction as proposed by the ANG, including bringing in all 10 or 11 C5As, their hangar constructions and runway extension of 26-8 will be completed. It would be an environmental disaster if runway 35-17 was destroyed and then all plans were cancelled. That risk is very high if one looks at the cost of this action versus the needs of this country's defense.

Sincerely,

James K. Newton

Jim Newton

[redacted]

Air National Guard Readiness Center/
CEVP
Lt. Col. J. J. Mitnik, WVANG EIS
3500 Fetchet Avenue
Andrews AF.B. MD 20762-5157

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WRITTEN COMMENT FORM

ENVIRONMENTAL IMPACT ANALYSIS PROCESS (EIAP)
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NAME: Harold W. and Betty Custer

TITLE/ORGANIZATION: _____

ADDRESS: [redacted]
(Street) (City/State/Zip)

—COMMENTS—

We, the Custer family and most of our family live on Payne Ford Rd. right next to the landing lights that guide the planes in and out of the Airport. We have been living here next to the Runway for about 24 years. We are used to seeing and hearing about every plane that comes in and takes off from the Airport.

Our opinion of the C-5 galaxy is "that it does not make anymore noise than the C-130's". At first when we moved here, I was a little annoyed at the C-130s noise, until I got used to them. We would like to see the C-5 galaxy come to Martinsburg, altho I will miss the C-130's.

I cannot see how someone living a ½ mi. down the road or someone living in Inwood, W.V. would pick on the C-5 galaxy coming to our city and saying this make too much noise. Glad the people complaining about the C-5 hearing noise and pollution. The C 130's make just as much noise and fly more. They leave a stream of smoke behind them. What would people think and do if the C-130's and the C-5 galaxy would leave our city. What about the jobs and the air guard that would leave. We should be proud of the C-130's and C-5's because they have been active in Vietnam and other war's our men and women have fought in, for our freedom. I say God Bless the people bringing the C-5's to our City.

"The Custer family"

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NAME: Elizabeth A. Lowe

TITLE/ORGANIZATION: home owner

ADDRESS: [redacted]
(Street) (City/State/Zip)

—COMMENTS—

see attached

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I attended the meeting on November 7th. I also live close enough to have caught the fly-by earlier in the evening.

I want to offer my support in whatever it takes for the military to see this project through. I do not know the politics of it all, and I'm sure that plays a big part, but the bottom line for me is to support the military so when we need their services they are ready.

Talking after the meeting a few of us had the same thought about the property owners around the immediate perimeter of the runways and airport itself. If the project is a "go" I think the government should buy up the surrounding property, let the homeowners live there until it actually becomes a reality. The close homeowners are never going to be satisfied, more so I think because of loss of income on property rather than noise factor.

Speaking of noise, it is my understanding that the C-5s will not be party to as many missions as the C-130s so I do not think the noise factor will be that detrimental. I am willing to leave those studies to the experts.

Personally, I feel quite comforted being this close to the facility even though we might be a target at some time. There is something about seeing the planes circling the area.....

Sincerely,

Lizzie A. Lowe

[redacted]

AIR NATIONAL GUARD REDINESS CENTER/CEVP
LT COL T J MITNIK, WVANG EIS
3500 FETCHET AVE
ANDREWS AFB, MD 20762-5157

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NAME: PAUL CLOHAN

TITLE/ORGANIZATION: _____

ADDRESS: [redacted]
(Street) (City/State/Zip)

—COMMENTS—

I am opposed to the closure of runway 17-35 This runway is necessary for light aircraft operations at MRB as it is aligned most closely to the prevailing wind conditions. Other local airports (eg. OKV) use a North-South runway as the winds are mostly NorthWest, not Westerly.

Additionally, I don't believe that an adequate noise profile has been done in the vicinity of the MRB Airport. There is insufficient buffer zone to support the use of such a large aircraft at MRB

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Andrews AFB MD 20762-5157

[redacted]

Lt. Col. T.J. Mitnik, WVANG EIS
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NAME: W. Douglas Stewart

TITLE/ORGANIZATION:

ADDRESS: [redacted]
(Street) (City/State/Zip)

—COMMENTS—

I have several comments regarding the C-5 airplanes and the lengthing of the East-West runway and closing of North-South runway.

Having lived on a farm at the west end of the runway all my life (73 years) and the fact this farm has been in my family since 1847, I'm making these statements.

The increased noise of the C-5's is considerably louder than the present C-130's. Although I'm told approximately 50 flights per month will be made by the C-5's compared to 1500 - 1700 C-130's, the noise is much, much louder. I have lived with the C-130 noise for a considerable time especially when warming up their engines for 25-30 minutes on the end of the west runway. The noise is intolerable and I'm not looking for any increase in noise.

Due to the increase noise level, my property values are due to plummet. A realtor has informed me of this already and said the property will be worth zero. My farm is one of the few things I have to leave to my children and grandchildren.

With the expansion of the east-west runway, this

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DISCLOSURE STATEMENT
DATA REQUIRED BY THE PRIVACY ACT OF 1974
(5 U.S.C. 552A)

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1. **Authority:**
   23 U.S.C. paragraphs 557a, 557b, 597, 709a

2. **Principal Purpose:** Your name, address and comments, if provided during the EIAP are:
   - Used to compile mailing lists for sending project reports, brochures, and other information concerning the EIS to those individuals and groups who might be interested.
   - Forwarded to federal, state and local agencies and elected officials.
   - Used to compile mailing lists for other projects in which the person supplying the information might have an interest.
   - Compiled in a Record of Public Meeting and made available to the public.
   - Published in project reports and made available to interested individuals and groups.

3. **Effects of Individual Not Providing Information:**
   Failure to provide the information requested would prevent delivery of documents and notification of further developments. However, documents will be available in local public areas, such as libraries, and their locations published in local newspapers.

—COMMENTS CONTINUED—

Surely is going to open up the possibility of larger aircraft using the airport. Probably commercial aircraft including jet aircraft which also contribute to the noise level.

In short, I am against bring in C-5's and enlarging the runways.

However, after attending the EIAP meeting and seeing the many thousand of man-hours involved with the planning, the lavish information displays and hours of time by the staff, I have little doubt of what I say or do will make an lots of difference - it's a done deal.

[redacted]

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NAME: RONALD L. WARE

TITLE/ORGANIZATION: _____

ADDRESS: [redacted]
(Street) (City/State/Zip)

—COMMENTS—

I ATTENDED A PUBLIC MEETING TONIGHT ABOUT THE C130-C5 CONVERSION FOR THE 167 AIRLIFT WING. I HEARD COMMENT ON THE NOISE ISSUES OF THE C-5. MY HOME IS 350-400 FT LEFT OF THE CENTER LINE OF ILS LIGHTS ON THE APPROACH END OF RUNWAY 08-26. I HAVE LIVED IN THIS AREA FOR 17 YEARS. I HAVE HEARD NUMEROUS AIRCRAFT LAND ON THIS RUNWAY. I HAVE HEARD THE C130's AND C-5 AIRCRAFT LAND AND TAKE OFF IN BOTH DIRECTIONS ON THIS RUNWAY AND I CAN HONESTLY SAY THAT THE C-5 IS NOT ANY LOUDER THAN THE C-130 AIRCRAFT. I FIGURE THAT THIS IS A CLOSE TO "GROUND ZERO" AS YOU CAN GET. ACTUALLY SITTING IN MY HOUSE I CAN HEAR THE C130 WHEN THEY START THEIR ENGINES BEFORE THEY START TO TAXI. THIS EVENING MY WIFE AND I HAD TO GO OUTSIDE THE HOUSE TO HEAR THE ENGINES RUNNING ON THE C-5. THE C-5 IS NOT ANY LOUDER THAN THE C130 DURING TAXING. I ALSO KNOW THAT WHEN THE C-5 TAKES OFF IT WILL NOT BE FLYING AROUND THE FLAG POLE UNTIL 9 OR 10 PM AT NIGHT AS THE C130 DOES TWO OR THREE NIGHTS A WEEK. THE C-5 WILL TAXI AND TAKE OFF AND LEAVE TOWN. IN MY OPINION THIS MEANS IT WILL BE ALOT QUIETER AROUND MY HOME.

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—COMMENTS CONTINUED—

I HAVE NOT REALLY HEARD OF MANY PEOPLE WHO ARE AGAINST THE C-5 MOVING INTO MARTINSBURG, CASE IN POINT IS THAT I REALLY DIDN'T SEE THAT MANY PEOPLE AT THE MEETING TONIGHT AGAINST THE C-5, BASED ON THE LOCAL POPULATION AROUND THE AIRPORT. I AM LOOKING FORWARD TO THE C-5 MOVING TO MARTINSBURG.

SHELLEY MOORE CAPITO
2ND DISTRICT, WEST VIRGINIA

COMMITTEES:
TRANSPORTATION & INFRASTRUCTURE
FINANCIAL SERVICES
SMALL BUSINESS

Congress of the United States
House of Representatives
Washington, DC 20515-4802

1431 LONGWORTH H.O.B.
WASHINGTON, DC 20515-4802
202-225-2711

4815 MACCORKLE AVE.
CHARLESTON, W.V. 25304
304-925-5964

300 FOXCROFT AVE.
SUITE 102
MARTINSBURG, W.V. 25401
304-264-8810

WWW.HOUSE.GOV/CAPITO

October 16, 2003

Major General Allen E. Tackett
Adjutant General's Office
1703 Coonskin Drive
Charleston, West Virginia 25311

Dear General Tackett:

I am writing on behalf of my constituent, Roscoe R. Rauch, [redacted] Martinsburg, WV 25401, who has contacted my office for assistance. Enclosed, for your review, is a copy of the information I received.

Any information or assistance that you can provide in this matter would be deeply appreciated. Please mail all correspondence regarding this inquiry to my office at 300 Foxcroft Avenue, Suite 102, Martinsburg, WV 25401. You can also contact me by phone at (304) 264-8810 or by fax at (304) 264-8815.

Sincerely,

Shelley

Shelley Moore Capito, M.C.

SMC:pah

OCT 16 2003

Roscoe R. Rauch
[redacted]

10-10-2003

Congresswoman Shelly Capito
Attn: John Reisenweber
300 Foxcroft Avenue, Ste. 102
Martinsburg, WV 25401

Re: Proposed relocation of C-5 Aircraft to
Eastern WV Regional/Shepherd (MRB) airport

Attention John Reisenweber:

This letter will confirm our recent conversation regarding my opposition to closing the general aviation North-South runway at the Eastern WV Regional/Shepherd (MRB) airport in order to accommodate the C-5 Aircraft relocation. The following is a outline of the reasons for my opposition:

1. INADEQUATE SPACE: The Eastern WV Regional/Shepherd airport does not have adequate space to accommodate the relocation of the C-5s. They are currently located on an Airport nearly twice larger than the 227 acres at the Eastern WV Regional/Shepherd airport. As a practical matter,our airport cannot accommodate theC-5s without some sort of major expansion. To the best of my knowledge and information, there are no plans for acquiring additional land for such an expansion. Accordingly, the plan to relocate the C-5s to Martinsburg is not geographically feasible.

2. BREACH OF NATIONAL SECURITY: The security at theEasten WV Regional/Shepherd Airport will be compromised with relocation of the C-5s. Current security provisions, the fight of increased concern over international terrorism as well the strategic location of our Airport, are simply inadequate to guard airport property and protect civilians who use and live around the Eastern WV Regional/Shepherd Airport where the C-5s will be relocated. If we increase security staff and resources to accommodate the increase risks presented by the reocation of the C-5s we still have inadequate space and funding for such increased security needs and resources. Even in such an event of additional acres to the Eastern WV Regional/Shepherd Airport, however security will be further compromised for the existing 167th Air Guard Unit.

3. COMPROMESED SAFEY OF RESIDENTS: In addition to the obvious security concerns, local residents will suffer from an increased risk of harm due to heavier traffic flow in and around the (MRB) Airport.Current congestion resulting from ingress and egress have already required us to add and additional access road off of Route 11. The C-5s will only add to the diminution of safety for area residents with no current plan or study to provide any additional access.A fully loaded C-5 will be at a dangerous low altitude on approach over Airport Road (East) and departure over US Route 11 (West) any mishap

during an approach and/or departure could place Residents in a DEADLY area.

4. ADVERSE IMPACT OF INCREASED MOISE LEVELS: The C-5s will add to the noise level for area residents, exceeding 70db, will exceed the nationally acceptable standard. Local farmers will adversely suffer from increased noise in dealing with their livestock. Families will suffer in diminished enjoyment of heir homes (both inside and outside). The required approach distance for the C-5s will further create an adverse and hostile environmental impact for local residents whose only recourse may be to institute legal proceeding, relocate or both.

5. INADEQUATE FINANCIAL RESOURCES: One obvious failure on the part of the proponents for relocation of the C-5s to Martinsburg is that no one has planned, studied for the FAA's likely (if not certain) response. The FAA will, without doubt, require West Virginia to build a new general aviation North-South runway once the C-5s have displaced the current one. As with all general aviation, the FAA clearly controls the agenda. When the FAA requires the new runway to be built,the financial burden will squarely and exclusively fall on the shoulders of the taxpayers of West Virginia.
Also funding for a new Terminal building at the Eastern WV Regional/ Shepherd (MRB) airport has been provided, hoping to attract General Aviation, such as Fixed Bast Operator (FBO)-Flight School and services to to general aviation airplanes. With the C-5s operations and no crosswind runway, interest in general aviation maybe lacking and general aviation at our airport may fade away.

While it is true that I am a private pilot (for which Congresswoman Capito's office provided significant assistance) and have personal concerns for the commitment to general aviation in Martinsburg . I am also concerned for Congresswoman Capito's position on this issue. Many of her constituents have the same concerns expressed in this letter and will be adversely affected with the relocation of the C-5s. I am hopeful that this letter will give Congresswoman Capito sufficient information to question the reasonableness if not real problems in relocating the C-5s to Martinsburg.

Thank you for your consideration of my concerns.

Very truly yours

Roscoe R. Rauch

Snapshot Report: Incoming Constituent Message

Imported through Webrespond Daemon

Report Date:8/25/2003

Assign Staff: email
Address To: General
Name: Mrs. Teresa Staubs
Address: [redacted]
Martinsburg WV 25401 USA
URL:
Email Addr: dustyroo@aol.com
Home Phone: (304) 260-0909
Cell Phone:
Fax:
Work Phone:

Salutation: Dear Mrs. Staubs:
Interest Code: W-OTHER
Classification:
Ref. Number:

In Type:
Org Name:
P. Code:
Grp Id: W030825
Title:

Reply Ltr:
Assign Ltr:
Category 1:
Category 2:
Category 3:

Message Body:
Subject Desc: Other

Date Received: 8/24/2003 5:35:46 PM

Senator Byrd,
My concern is regarding the expansion of the Airwing unit and the airport in Martinsburg. While this effort can supply our community with new jobs, I remain concerned.
I am concerned about the air traffic, noise, and fuel dumping by the massive planes that are to be put into use in this facility. According to literature that I have read: it is common practice for these massive planes(the ones that carry tanks)to dump any remaining fuel before landing. If this is a common practice and will remain so what will happen to our flora, fauna, wildlife, and resources? What happens when these fuels leech into our wells and contaminate our water, kill our vegitation, and cause irreperable health hazards for the people in the area surrounding the airport? Can this effort be worth all the harm it could inflict? Please look into these fuel dumping practices and consider the harm they can inflict on our fair state and it's people.
Respectfully yours,
Teresa L. Staubs

Max E. Grubb
[redacted]

January 10, 2003

Senator Robert C. Byrd
311 Hart Senate Office Bldg.
Washington, D.C. 20510

Dear Senator Byrd

Several months ago you announced a major expenditure to upgrade the airport at Martinsburg and change the mission of the Air National Guard Unit stationed at that base to include a different aircraft. Nothing has been said or printed about that project since that announcement and I thought you could provide an update.

It was recently announced that Secretary of Defense Rumsfeld would consider another round of base closings beginning in the year 2005 and I wondered how that might affect the project.

Very Truly Yours

Max E. Grubb

Msx E. Grubb

AIRCRAFT OWNERS AND PILOTS ASSOCIATION
421 Aviation Way • Frederick, MD 21701-4798
Telephone (301) 695-2000 • FAX (301) 695-2375
www.aopa.org

October 1, 2002

Mr. Richard Wachtel, Chairman
Eastern West Virginia Regional Airport Authority
180 Aviation Way
Martinsburg, WV 25401

Dear Mr. Wachtel:

The Aircraft Owners and Pilots Association (AOPA) is a membership association consisting of over 385,000 pilots and aircraft owners nationwide, 1,430 of whom reside in the state of West Virginia. AOPA is committed to ensuring the continued viability, growth, and development of aviation and airports in West Virginia and the United States.

The Association was disappointed that the Airport Authority unanimously voted to grant the 167th Air Wing's request for expanding their leasehold on the airport to include the acreage presently occupied by the northern half of Runway 17/35. It is the Association's position, and that of our members based at Martinsburg, that a crosswind runway at Martinsburg is an asset that should not be given up lightly and that should be maintained to ensure the continued safe operation of the airport.

The Authority has an obligation to protect Civil Aviation interest at the Martinsburg Airport. On extremely short notice, the Guard's request was granted before a complete study of the impact their plan would have on General Aviation and whether the runway or a suitable replacement was required under FAA airport design guidelines.

The FAA has requested the airport to conduct wind coverage study and an update of the Airport Layout Plan showing the incorporation of the 167th's master plan. Additionally the airport should also conduct a runway traffic study for Runway 17/35. The Association requests copies of the completed wind study, traffic count and the updated Airport Master Plan.

The Association strongly recommends that the Authority preserve Runway 17/35 from its intersection with Taxiway Alpha south to the threshold of Runway 35 until such time as the Air Guard has completed their extension and strengthening of Runway 8/26.

Not only will this provide another taxiway access to the Air Guard ramp for aircraft landing on Runway 8/26, it will preserve the possibility of restoring Runway 17/35 should the unit not survive future meetings of the BRAC.

It is the Association's sincere desire work with the Authority and our affected members to develop a solution for all users of the airport and not cater to a single specific tenant. We would not oppose the closure of Runway 17/35 if a replacement crosswind runway is identified on the ALP and construction is begun within a reasonable timeframe.

Thank you for taking into consideration the Association's views regarding this matter. Should you need additional information on this or any related issue, please contact me at 301-695-2200.

Sincerely,

Anne Esposito

Anne M. Esposito
Vice President Airports
Aircraft Owners and Pilots Association

CC:
Mr. Howard L. Strauss, President Berkeley County Commission
Brigadier General V. Wayne Lloyd, Commander, WVANG
Mr. William E. Walkup, Airport Manager
Ms. Sharon Daboin, FAA ADO Harrisburg
Mr. Larry Clark, FAA Beckley Field Office
Mr. Ron B. Porterfield, AOPA ASN Volunteer
Mr. John Luce, AOPA Regional Representative

"MOUNTAIN AIR"
EAA Chapter 1071
275 Aviation Way
Martinsburg, WV 25401

LTCOL T.J. Mitnik
Martinsburg EIS, ANG/CEVP
3500 Fetchet Avenue
Andrews Air Force Base, MD 20762

23 January 2003

Dear LTCOL Mitnik,

We have reviewed all of the alternative plans for construction by the Air National Guard at the Eastern WV Regional Airport (MRB), at Martinsburg, WV and Alternative Six Exhibit A.6m is the most suitable alternative for General Aviation. Recently, Airport Manager Bill Walkup and I did a physical tour of the area around Runways 08 and 17. I was surprised at the amount of land that is not being utilized in that northwest quadrant. I have studied in detail Exhibit A.6M and would like to submit some alternative ideas.

One way to eliminate the need to relocate the C-130's during construction would be to expand and utilize the Alpha taxiway from Runway 08 West back to Runway 17. This area is seldom used by General Aviation but is used daily by the Air National Guard and a few larger planes. This taxi area could be closed to other traffic while construction is in progress and enlarged for parking the C-130's. This area is 2400 feet by 75 feet at the present time and could be widened to 2400 feet by 200 feet which would be approximately 11 acres, more than enough space to park all ten C-130's wing-tip to wing-tip. This area has storm water drainage in place and security would not be a problem at this location since it is in full view of the tower.

Additional space could be gained by shifting the construction project to the east several hundred feet in front of and beyond Howard Aircraft parallel to Runway 26 and out towards the assault strip. This area in front of Howard Aircraft is approximately 8 acres to the end of Runway 26 and would allow Howard Aircraft and Air - Photographic to continue to access Runway 26 East. This shift would obviate the need to relocate the Control Tower, which would save considerable time and money.

I think that an innovative use of these areas would solve many problems, satisfy the Air National Guard requirements, and keep intact a much-needed Runway 17 – 35 for General Aviation.
Thank you for your consideration in this matter.

Sincerely,

Jerry Hockman

Jerry Hockman, EAA No. 456573
Vice President

DEPARTMENT OF THE AIR FORCE
AIR NATIONAL GUARD

12 DEC 03

ANG/CEVP
3500 Fetchet Avenue
Andrews AFB MD 20762

Mr. Jerry Hockman, EAA No. 456573
Vice President, EAA Chapter 1071
275 Aviation Way
Martinsburg, WV 25401

Dear Mr. Hockman

We are in receipt of your 23 January 2003 letter regarding alternative plans for construction by the Air National Guard at the Eastern West Virginia Regional Airport. I must apologize for not responding in writing as the team members and I were under the impression that we had verbally responded to all of the alternative questions that had been presented and did not realize that you were expecting a written response. This oversight is totally a misunderstanding on my part.

Regarding your proposal to use the land in the northeast quadrant of the airport, although there appears to be ample land for parking of aircraft, the lateral clearance distance from the centerline of runway 08/26 requires nothing can be placed further south than the centerline of the existing Taxiway "A". Shifting the project east several hundred feed in front of Howard Aircraft would only allow approximately a 75' strip of land from the property line of Howard Aircraft to the centerline of Taxiway "A". This is not nearly enough for any type of construction or parking of aircraft. Any significant development in this area would require the acquisition of private lands.

Additionally, during this construction period we would still have the requirement to perform annual isochronical inspections on 12 C-130 aircraft. These inspections must be performed in the existing hangars and take thirty to forty-five days to perform on each aircraft. If we moved the project to the east, the existing hangars would not be accessible.

The only feasible way to construct the C-5 mission infrastructure at the Eastern West Virginia Regional Airport on the existing base would be to level the existing infrastructure and totally rebuild the installation. This would require relocation of all base personnel for a period of four to five years and cost substantially more than the current proposed action. Furthermore, the operational date of the unit would be delayed considerably, which would jeopardize the project as a whole.

Please contact me with any questions or concerns that you may have regarding this project in the future. Your input is important to the successful conclusion of the National Environmental Policy Act process and the ultimate decision making process of the Air Force regarding this proposed action.

Sincerely

TAMMY J. MITNIK, Lt Col, USAF
Environmental Staff Officer
EIS Project Manager

"MOUNTAIN AIR"
EAA Chapter 1071

275 Aviation Way
Martinsburg, WV 25401

LTCOL T.J. Mitnik
Martinsburg EIS, ANG/CEVP
3500 Fetchet Avenue
Andrews Air Force Base, MD 20762

Nov. 4, 2002

Dear LTCOL Mitnik,

EAA Chapter 1071 and its members based at Eastern WV Regional Airport (MRB), at Martinsburg, WV are extremely concerned regarding the proposed closure of runways 17 – 35 being planned by the Air National Guard. Our chapter is the most active general aviation organization at this airport and our pilots have a large investment in planes and new hangars. Every week we lose airstrips across the country for various reasons with great impact on general aviation.

We have approximately 100 small planes hangared and based here and runways 17 – 35 are used a great deal, especially when the tower is closed, which is approximately 60% of the time. There are no official records on the number of takeoffs and landings when the tower is closed. No records were needed until recently. Our best estimate on the utilization of runway 17 – 35 is that 20% of all takeoffs and landings by general aviation use this runway.

We are not opposed to the future expansion of the Air National Guard 167th Airlift Wing. We think there is plenty of room for expansion without closing a very valuable runway to General Aviation. Considering the tremendous cost of runway construction, it would be very wasteful of taxpayer money to demolish such a valuable asset. We feel we have the best airport in the Shenandoah Valley and West Virginia because we have four runways, which provide much safer conditions in varying wind conditions for takeoffs and landings. It is very important to general aviation to have the flexibility of multiple runways when returning under adverse conditions, which is a large contributing factor to the outstanding safety record enjoyed at this airport.

We have a new terminal under construction, which will be completed in the near future This expanded facility will house a new restaurant, aviation museum, office space and lobby to accommodate increased general aviation air traffic and for attracting a commercial air carrier to Martinsburg - all the more reasons to keep runways 17 – 35 in operation. This airport is moving in the right direction and everyone associated with the airport is excited about the progress. The closure of runway 17 – 35 would greatly hinder the progress of general aviation in the area.

In the interest of maintaining the prominence and utility of this airport, and in the interest of upholding aircraft and pilot safety for general aviation, we respectfully request that runways 17 – 35 at the Eastern WV Regional Airport be preserved and that other alternatives be selected.

Thank you for your consideration in this matter.

Sincerely,

Jerry Hockman, EAA No. 456573
Vice President

JEFFREY A. GROVE, RCDD

[redacted]

Email JEFFGROVE@Hotmail.COM [redacted]

November 11, 2002

ANG/CEVP
3500 Fetchet Ave.
Andrews AFB, MD 20762-5157

Attn: Lt. Col. Mitnik,

I would like to thank the Air National Guard and other Governmental agencies for the opportunity to have the public express their concerns on November 6 and 7 about C5A aircraft coming to Martinsburg. Per your request, I have summarized my comments made during the public meetings and have provided them in the following order.

- *Noise considerations* – the lack of available real estate to adequately mitigate.
- *Watershed* – More aircraft parking ramp runoff, the issue with Aircraft Deicing Fluid specific to the C5A, increased fuel storage, what is the plan to protect the public?
- *Security* – Your plan to keep a mission of this size and number of aircraft secure while being so close to public residential, commercial activities and public roadways?
- *Safety* – Closure of Runway 17-35. The loss of the runway negates the ability of the facility to keep adequate separation between larger and smaller aircraft in the air and on the ground.

I have also been informed that the Stewart AFB location has had some dialog with indigenous population with respect to the noise issue and would be interested to hear more about it.

I would appreciate any findings or information that may be available from your meetings. Also I do not have a clear picture as to the time line of events. As you may recall one of the speakers asked this question directly to General Lloyd and he was not able to give the information.

Please note I have copied James Byers of the FAA's Environmental Office, he has asked that I forward web information with regard to ADF as well as yourself. http://1515.hampshire.edu/mil/westover

Sincerely,

Jeffrey A. Grove

WINE - STILLWELL
CORPORATION

720 N. LOUDOUN STREET, P.O. BOX 2035, WINCHESTER, VIRGINIA 22604

OFFICE 540-662-4441
FAX 540-722-3643

November 5, 2002

Lt. Col. T.J. Mitnik
Martinsburg EIS, ANG/CEVP
3500 Fetchet Avenue
Andrews Air Force Base, MD 20762

Re: Conversion from C-130 to C-5
Martinsburg, WV

Dear Col. Mitnik:

We own a 1753 historic farm along the Opequon Creek in Frederick County, VA, Rt. 660 and the Opequon creek.

Currently the C-130's fly practice routes directly over our farm. At times this has been very annoying. With the much larger C-5's we are very concerned about the increased noise and vibration (which may affect our historic house) should these aircraft continue to fly the same practice route.

We respectively request that the aircraft flight paths be changed to avoid flying over our property.

Very truly yours,

James D. Stillwell

[redacted]

Stephenson, VA 22656

JDS/crf

November 7, 2002

Lt Col TJ Mitnik, WVANG EIS
3500 Fetchet Ave
Andrews AFB MD 20762-5157

Re: Martinsburg Airport EIS

David Spalding
President
Experimental Aircraft Association, Chapter 1071
1005 Clark Court
Harpers Ferry, WV 25425

As president of the local chapter of the Experimental Aircraft Association, Chapter 1071, I would like to voice this chapters 47 members concern.

We have always enjoyed the benefits of having the 167th on the field, this includes the fire and rescue members and security patrols. At times this chapter has asked for and received great support from this unit by providing static display aircraft and crews during our fly-in events. We are not opposed to the acquisition of the C-5 aircraft, and will miss the C-130, their tactical displays and airdrops. However, this chapter is concerned about the closure of the North/South runway.

This chapter is active with the restoration of historical aircraft, classics, home-built experimental aircraft and like all General Aviation aircraft, they are cross wind limited. The closure of this runway will severely limit the operation of our aircraft and will hamper this chapters Young Eagle flights, which to date have introduced and flown over 1,000 kids to general aviation. We have made arrangements with the controlling agency to take off on runway 35 and land on 26 during these events. This keeps our flights operating with a minimum of disruption to other aircraft, including the C-130's. With the closure of this runway, we will have increased wake turbulence separation times of up to 5 minutes before a takeoff can be commenced. While using the North/South runway, takeoffs can be safely accomplished with a minimum delay.

Martinsburg Airport has recently been designated as a reliever airport for the Washington DC area. This means an increase in General Aviation traffic arriving and departing this airport. Due to the geographical location of Martinsburg airport, within the Shenandoah Valley, a crosswind runway is required to enhance the safe operation of the airport. With the closure of this runway, there will be a loss of revenues for fuel, parking and the new million dollar Terminal still under construction.

According to the Airport Authority, no study of air traffic and runway use has been accomplished. A best estimate is 20 percent of the takeoffs and landings are on the North/South runway, an accurate count is not available.

Martinsburg airport has four runways, this is a major contribution to the safety record of this airport. Losing this runway will only hamper the safe operation of one of the largest group of airport users and taxpayers at this airport, the General Aviation community.

This chapter recommends the following:

1. A formal study to be accomplished to provide accurate number of takeoffs and landings on 17/35 prior to finalizing the Environmental Impact Study
2. Acquire the land to the north and east of the airport, to facilitate maintenance hangers.
3. Extend the North/South runway and develop a traffic pattern that would not limit arrival and departing aircraft and still provide the required obstacle separation and avoidance of the new maintenance hangers.
4. Construct a new crosswind runway prior to the closure of 17/35

Finally, Martinsburg Airport had the north/south (17/35) runway constructed not for the general aviation community, but because of the need to enhance operational safety. Has that safety factor suddenly disappeared?

Thank you

David Spalding
President
Experimental Aircraft Association, Chapter 1071

APPENDIX D

REGULATORY SETTING

APPENDIX D
REGULATORY SETTING

The following is a partial list of laws, general policies, and regulations that govern each specific resource areas addressed in the EIS. This regulatory framework also provides guidelines and management practices to mitigate or prevent adverse impacts on these resources.

D.1 AIRSPACE MANAGEMENT

The Federal Aviation Administration oversees and regulates airspace rules and policies applicable to the Air National Guard. Airspace safety is the primary objective and purpose of these policies and regulations. The applicable regulations regarding airspace include:

Air Force Instruction (AFI) 11-206 prescribes general flight rules which govern the operation of aircraft flown by the U.S. Air Force (USAF), to include the Air National Guard (ANG).

Federal Aviation Administration (FAA) Order 7610.4 specifies procedures for air traffic control planning, coordination, and services during activities and special military operations conducted in airspace controlled by or under the jurisdiction of the FAA.

FAA Order 7400.2D prescribes policy, criteria, and procedures applicable to rulemaking and non-rulemaking actions associated with airspace allocation and utilization, obstruction evaluation and marking, airport airspace analyses, and the establishment of air navigation aids.

FAA Order 7400.6 provides a compilation of regulations containing current airspace designations and pending amendments to those designations that are issued by the FAA. This order is published annually for the benefit of the public, since airspace designations are not carried in the Code of Federal Regulations or the Federal Aviation Regulations.

Federal Aviation Act (1958) created the Federal Aviation Administration (FAA) and charged the FAA Administrator with ensuring the safety of aircraft and the efficient utilization of the National Airspace System, within the jurisdiction of the United States.

Federal Aviation Regulation Part 71 (1975) delineates the designation of Federal airways, area low routes, controlled airspace, and navigational reporting points.

Federal Aviation Regulation Part 73 (1975) defines special use airspace and prescribes the requirements for the use of that airspace.

Federal Aviation Regulation Part 91 (1990) describes the rules governing the operation of aircraft within the United States.

FAA Handbook 7400.2C (1992) prescribes policy, criteria, and procedures applicable to rule-making and non-rule-making actions associated with airspace allocation and utilization, obstruction evaluation and marking, airport airspace analysis, and the establishment of air navigation aids.

FAA Handbook 7110.65 (1989) prescribes air traffic control procedures and phraseology for use by personnel providing air traffic control services in the United States.

D.2 AIR QUALITY

National and State air quality standards and regulations have been established for the protection of public health. Local agencies maintain the responsibility of administering and enforcing these regulations. The applicable laws and regulations regarding air quality include:

The Federal Clean Air Act of 1970. This act, with its subsequent amendments of 1977 and 1990, set forth National Ambient Air Quality Standards (NAAQS) for ozone (O_3), carbon monoxide (CO), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), particulate matter less than ten microns in diameter (PM_{10}), and lead (Pb), which must not be exceeded more than once per year. The Act requires individual states to adopt standards which set acceptable pollutant concentrations equal to, or less than, the Federal standards.

Prevention of Significant Deterioration (PSD) Regulations, 40 CFR 52.21. These regulations apply to major stationary sources located in areas which are in attainment of NAAQS. The regulations establish limits, or allowable increments, of increase in SO_2, NO_2, and total suspended particulate (TSP) concentrations resulting from a new major source or major source modification. More stringent increments have been established for Class I areas, which include national parks and wilderness lands, than for Class II areas, which encompass the rest of the United States. Major sources (those which emit more than 250 tons per year of criteria pollutants for a period greater than two years) located within 100 kilometers of a Class I area must address potential air quality impacts on the area.

State Implementation Plan (SIP). In areas that exceed the NAAQS (nonattainment areas), the Clean Air Act *(40 CFR 51)* requires the state to adopt a SIP, outlining a policy by which affected areas can reduce emissions, improve air quality, and regain attainment status. States, in turn, require affected counties to develop air quality attainment or maintenance plans. This process involves the adoption of specific emission-reduction strategies to enable counties that are in nonattainment to show reasonable further progress toward attainment of the applicable air pollution standards. These plans generally contain new source review (NSR) rules; require Best Available Control Technology (BACT), emission offsets, and ambient air monitoring; and may include mobile emissions limitations.

The Clean Air Act Amendments (CAAA) of 1990 established new deadlines for achievement of the NAAQS depending on the severity of nonattainment. The CAAA of 1990 also require states to develop an operating permit program that requires all major sources of pollutants to obtain an air permit, and contains programs designed to reduce mobile source emissions and control emissions of hazardous air pollutants through establishing control technology guidelines for various classes of sources.

Clean Air Conformity Act. Major Federal actions are required under section 176(c) of the Clean Air Act to demonstrate conformance to the appropriate SIP or Federal Implementation Plan before they can be implemented. Federal actions must not 1) cause or contribute to any new violation of any standard in the area; 2) interfere with

provisions in the application SIP for maintenance or attainment of air quality standards; 3) increase the frequency or severity of any existing violation of any standard; or 4) delay timely attainment of any standard, any interim emission reductions, or other milestones included in the SIP for air quality.

D.3 NOISE

National, state and local regulations and policies regarding noise impacts have been established to protect the general public. Specific thresholds are set to determine potentially harmful noise levels and are used as planning guidelines. The applicable regulations and procedures regarding noise include:

Noise Control Act of 1972. The Noise Control Act of 1972 (PL 92-574) established a national policy "to promote an environment for all Americans free from noise that jeopardizes their public health and welfare." The Act provides for a division of powers between the Federal, state, and local government, in which the primary Federal responsibility is for noise source emission control, with the states and other agencies retaining the rights to control noise sources and the level of noise within their communities and jurisdiction.

The Federal Interagency Committee on Noise (FICON). FICON was formed in 1990 to review policies that govern the assessment of airport noise impacts. FICON consisted of representatives of governmental agencies that have responsibilities for airport noise. These agencies included the Federal Aviation Administration (FAA) and the Military Services. FICON reviewed the body of science associated with methodologies and metrics for assessing airport noise impacts, Federal policies governing the assessment of airport impacts, and the legal aspects of current and proposed Federal policies for assessing airport noise.

Federal Aviation Administration, Department of Transportation, Title 14 – Aeronautics and Space, Chapter I (14 CFR, Chapter I – Part 150). The FAA addressed the issue of controlling noise sensitive land uses around airports in a series of orders and advisory circulars, including FAR Part 150, Airport Noise Compatibility Planning.

Air Force manual 19-10 describes tools to aid in the development of acceptable noise environments.

Executive Order 12088 requires the head of each executive agency to be responsible for ensuring that all necessary actions are taken for the prevention, control, and abatement of environmental pollution, including noise pollution, with respect to Federal facilities and activities under the control of the agency.

D.4 LAND USE

National and state resource management plans, local plans and zoning regulations, and other policies that pertain to land use, provide a guideline for development in these areas. Other pertinent Federal laws include:

Executive Order 11988 - Floodplain Management. This order directs Federal agencies to avoid, to the extent possible, the long- and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative.

Executive Order 11990 - Protection of Wetlands. This order states that Federal agencies are to avoid, to the extent possible, the long- and short-term impacts associated with the destruction or modification of wetlands and to avoid direct and indirect support of new construction in wetlands whenever a practicable alternative exists.

Air Installation Compatible Use Zone (AICUZ) Program. The Department of Defense initiated the Air Installations Compatible Use Zones (AICUZ) program to protect the public's health, safety, and welfare, and to prevent civilian encroachment from degrading the operational capability of military air installations. The AICUZ program recommends land uses that will be compatible with noise levels, accident potential, and flight clearance requirements associated with military airfield operations.

Federal Aviation Administration, Department of Transportation, Title 14 – Aeronautics and Space, Chapter I (14 CFR, Chapter I – Part 150). The FAA addressed the issue of controlling noise sensitive land uses around airports in a series of orders and advisory circulars, including FAR Part 150, Airport Noise Compatibility Planning.

D.5 GEOLOGY AND SOILS

Laws and policies have been established to protect geological and soil resources from potential adverse impacts. New development has the potential to displace, disrupt, or disturb geological features and soils. The applicable regulations and procedures regarding geology and soils include:

Executive Order 11207. This order promotes coordination of Federal programs affecting agricultural and rural area development and promotes cooperation among Federal departments and agencies to achieve consistent administration programs affecting agricultural and rural area development.

Federal Soil Conservation Law (16 United States Geological Survey [USGS] 590a). This law "provides permanently for the control and prevention of soil erosion by preventive measures, including engineering operations, methods of cultivation, growing of vegetation, and changes in land use."

Soil Conservation and Domestic Allotment Act (7 USGS 128). This Act mandates Congress to "conserve national resources, preventing the wasteful use of soil fertility . . . (and) preserving and maintaining the farm and ranch land resources in the national public interest."

Other applicable regulations include Federal and state laws protecting mineral rights and state and local laws regarding protection of geologic resources (considered on a case-by-case basis).

D.6 WATER RESOURCES

Statutes, regulations, and executive orders enacted to protect water resources form the basis for policy guidelines and management practices relating to water resources. They include:

Comprehensive Environmental Response Compensation and Liability Act (CERCLA) of 1980. This is the primary law which regulates remediation of environmental contamination.

Executive Order 11988-Floodplain Management. This order directs Federal agencies to avoid, to the extent possible, the long- and short-term adverse impacts associated with occupancy and modification of floodplains.

Executive Order 11990 - Protection of Wetlands (United States Code [USC] 1221, 1226). This order directs Federal agencies to avoid, to the extent possible, the long- and short-term adverse impacts associated with destruction or modification of wetlands.

Federal Clean Water Act of 1977 (33 USC 1251 et seq.). This act is the primary law regulating water pollution. Relevant sections include:

- Section 208 requiring that states develop programs to identify and control non-point sources of pollution, including runoff.
- Section 313(a), requiring that Federal agencies observe state and local water quality regulations.
- Section 401(a)(1) requiring any applicant for a Federal permit (i.e., 404) to provide certification from the State in which the discharge originates that such discharge will comply with applicable water quality provisions.
- Section 402, requiring the EPA Administrator to develop the National Pollutant Discharge Elimination System (NPDES) to issue permits for pollutant discharges to waters of the Untied States.
- Section 404, requiring an Army Corps of Engineers (ACOE) permit for work in waters of the U.S., including wetlands.

Oil Pollution Act of 1990 (OPA 19). This act requires owners and operators of facilities which could cause substantial harm to the environment to prepare and submit plans for responding to worst-case discharges of oil and hazardous substances.

Resource Conservation and Recovery Act (RCRA) of 1976. This act is the primary law regulating the handling of hazardous waste, which includes wastes generated during environmental clean-up.

Safe Drinking Water Act (40 USC 100 et seq.). This act sets limits on concentrations of contaminants in drinking water sources and established the Underground Injection Control program to protect underground sources of drinking water.

D.7 BIOLOGICAL RESOURCES

Local, state and Federal laws and policies have been created to protect threatened and endangered species, wildlife habitat, and sensitive biological resources such as wetlands. Any development occurring near sensitive biological resources should be managed and actions should be in compliance with these protective laws and policies. The applicable laws and regulations regarding biological resources include:

Endangered Species Act of 1973 (50 CFR Part 402), as amended. This act protects proposed and listed threatened or endangered species. Formal consultation with the United States Fish and Wildlife Service (USFWS) is required under Section 7 of the Act for all Federal projects and other projects requiring Federal permits that could adversely affect any proposed or listed species. Pursuant to Section 402.12 of the Code of Federal Regulations, the lead Federal agency of a proposed action that could adversely affect a listed species is required to prepare a Biological Assessment (BA). The BA is the initial step in a formal Section 7 consultation with the USFWS. The USFWS then prepares a biological opinion, which includes a determination of whether or not the Federal action in question would jeopardize the continued existence of the species in question is the end-product of a formal consultation.

Executive Order 11988, Floodplain Management. This order requires that governmental agencies, in carrying out their responsibilities, provide leadership and take action to restore and preserve the natural and beneficial values served by floodplains. This order requires each Federal agency to determine whether a proposed action must occur in a floodplain, or if impacts on flood storage capacity would result, and to consider practicable alternatives. If no practical alternative can be demonstrated, the executive order requires minimizing harm and notifying the public through the A-95 state clearinghouse process why the project must be located in the floodplain.

Executive Order 11990, Protection of Wetlands (16 USC 1221-1226). This order requires that governmental agencies, in carrying out their responsibilities, provide leadership and "take action to minimize the destruction, loss, or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands." Each agency is to consider factors relevant to a potential impacts on the survival and quality of the wetlands by maintenance of natural systems, including conservation and long-term productivity of existing flora and fauna, species and habitat diversity and stability, hydrologic utility, fish, and wildlife. If no practical alternative can be demonstrated, agencies are required to provide for early public review of any plans or proposals for new construction in wetlands.

Migratory Bird Treaty Act of 1972 (16 USC Sections 703-711). This act protects all migratory birds with the exception of the English Sparrow, the Rock Pigeon, and European Starling by limiting the transportation, importation, killing, or possession of these birds.

Public Law (PL) 86-797, Fish and Wildlife Conservation on Military Reservations (Sikes Act), as amended by PL 90-465. This law applies to all commands and personnel and covers installations and facilities located in the United States that contain land and water areas suitable for conservation and management of fish and wildlife resources. Fish and wildlife management should be integrated with other natural resource activities into a balanced multiple-use program. The law requires cooperative management plans with state and Federal fish and wildlife conservation agencies. The amendment addresses outdoor recreation programs on military lands.

Section 402 of the Clean Water Act of 1977, as amended (33 CFR Part 320-330). This section requires an NPDES permit for all discharges to reduce pollution that could affect any form of life.

Section 404 of the Clean Water Act (33 CFR Part 320-330). This section regulates the filling or discharge of fill materials into wetlands and "waters of the U.S." Projects that

include such activities must be reviewed by the ACOE and receive technical input from the EPA and USFWS, and other agencies. Certain activities in wetlands or "waters" are granted a general permit, which allows the filling of wetlands when aggregate impacts do not exceed one acre. The ACOE assumes discretionary jurisdiction over proposed impacts on one to ten acres (i.e., ACOE may issue a nationwide permit or require an individual permit), and assumes mandatory jurisdiction over proposed impacts on ten or more acres of wetlands (i.e., an individual permit would be required). In circumstances where the placement of fill in a wetland requires a 404 permit from the ACOE, an alternative analysis is required by the Environmental Protection Agency (EPA). This alternatives analysis must determine that the proposed fill is unavoidable and there are no reasonable alternatives.

D.8 CULTURAL RESOURCES

Numerous Federal laws and regulations require Federal agencies such as the Air National Guard to consider the effects of a proposed action on cultural resources. The most pertinent laws and regulations concerning the protection and treatment of cultural resources include:

Native American Graves Protection and Repatriation Act (NAGPRA). On November 16, 1990, President George Bush signed into law the Native American Graves Protection and Repatriation Act. The Act addresses the rights of lineal descendants and members of Indian Tribes and Native Hawaiian organizations to certain Native American human remains and cultural items with which they are affiliated.

Antiquities Act of 1906 (34 Stat. 225; 16 USC 431). This act provides for the protection of historic or prehistoric remains or any object of antiquity on Federal lands; establishes criminal penalties for unauthorized destruction or appropriation of antiquities; and authorizes scientific investigation of antiquities on Federal lands, subject to permit and regulations. Paleontological resources also are considered to be under the authority of this act.

Historic Sites Act of 1935 (49 Stat. 666; 16 USC 461-467). This act authorizes the establishment of national historic sites and the preservation of historic sites and archaeological properties of national significance; provides the basis for the designation of national historic landmarks; establishes criminal penalties for violation of regulations pursuant to the act; and authorizes interagency, intergovernmental, and interdisciplinary efforts for the preservation of cultural resources.

National Register of Historic Places (36 CFR 60). This regulation, promulgated by the Department of the Interior, establishes the National Register and outlines the process for nominating properties to it.

Determination of Eligibility for Inclusion in the National Register for Historic Places (36 CFR 63). This regulation codifies the process by which Federal agencies determine a property's eligibility for inclusion in the National Register to implement Executive Order 11593 and the National Historic Preservation Act of 1966, as amended.

National Historic Preservation Act of 1966 (NHPA) (80 Stat. 915; 16 USC 470). This act declares historic preservation as a national policy and defines it as the protection, rehabilitation, restoration, and reconstruction of districts, sites, buildings, structures, and objects significant in American history, architecture, archaeology, or culture, including

the encouragement of preservation at state, local, and private levels. The law also directs the expansion of the National Register to include cultural resources of state and local significance, in addition to those of national significance; authorizes matching Federal grants to states and the National Trust for the Historic Preservation for acquisition and rehabilitation of National Register properties; establishes an Advisory Council on Historic Preservation (ACHP); and in Section 106 provides direction for Federal agencies in the event an undertaking affects a property eligible for or included in the National Register. As amended (PL 94-458, 90 Stat. 1942), the act authorizes the Secretary of the Interior to withhold from disclosure to the public the location of National Register listings "whenever…the disclosure of specific information would create a risk of destruction or harm to such sites or objects."

Findings and Policy of National Historic Preservation Act of 1980 (94 Stat. 2987). This act amends the Historic Preservation Act of 1966 to continue the National Register of Historic Places for properties of national, state, and local significance; directs the Secretary of the Interior to establish guidelines for nationally significant properties, curation of artifacts, documentation of historic properties, and preservation of federally owned historic properties prior to alteration; designates a preservation officer in each Federal agency; authorizes the inclusion of historic preservation, inventory, and evaluation costs in project planning costs; authorizes the inclusion of historic inventory, evaluation, and data recovery in Federal licenses and permits; and authorizes withholding sensitive data on historic properties when necessary.

American Indian Religious Freedom Act of 1978 (92 Stat. 469; 42 USC 1996). This act establishes as U.S. policy protection and preservation for American Indians of their inherent right to freely believe, express, and practice their traditional religions. It also directs Federal agencies to consult with native traditional religious leaders to determine appropriate policy for protecting and preserving the religious and cultural rights and practices of American Indians.

Archaeological Resources Protection Act (ARPA) of 1979 (93 Stat. 721; 16 USC 470). This act clarifies and defines archaeological resources; prohibits the removal, sale, receipt, and interstate transport of illegally obtained archaeological resources from public or Indian lands; provides substantial criminal and civil penalties for those who violate the terms of the act; authorizes confidentiality of site-location information; and authorizes permit procedures to enable qualified individuals to study archaeological resources on public and Indian lands. The act supplements the Antiquities Act of 1906.

Archaeological Resources Protection Act of 1979, Final Uniform Regulation (32 CFR 229, 6 January 1984). This act was promulgated by the Departments of the Interior, Agriculture, and Defense, and the Tennessee Valley Authority and establishes uniform procedures for implementing provisions of the Archaeological Resources Protection Act of 1979. These regulations enable Federal land managers to protect archaeological resources on public and Indian lands.

Criteria for Comprehensive Statewide Historic Surveys and Plans (36 CFR 62). This regulation, promulgated by the Department of the Interior, describes the designation, responsibilities, and professional qualifications of the State Historic Preservation Officer (SHPO) and staff; the comprehensive statewide survey process; the state historic preservation plan; and protection of historic properties.

National Historic Landmarks Program (36 CFR 65). This regulation, promulgated by the Department of the Interior, sets forth the Secretary of the Interior's criteria for national significance and the process used to identify, designate, recognize, and monitor the integrity of national historic landmarks.

Protection of Historic and Cultural Properties (36 CFR 800). This regulation, promulgated by the ACHP, describes Federal agency and SHPO responsibilities for protecting historic and cultural properties.

Executive Order 11593 - Protection and Enhancement of the Cultural Environment (13 May 1971). This order asserts that the Federal government shall provide leadership in preserving, restoring, and maintaining the historic and cultural environment of the nation. It also directs Federal agencies to ensure preservation of cultural resources under Federal ownership and directs Federal plans and programs to contribute to the preservation and enhancement of non federally owned sites; directs Federal agencies to locate, inventory, and nominate to the National Register properties under their control or jurisdiction that meet the criteria for nomination; directs Federal agencies to exercise caution during the interim period to ensure that cultural resources under their control are not inadvertently damaged, destroyed, or transferred before the completion of inventories and evaluations of properties worthy of nomination to the National Register; and directs the Secretary of the Interior to undertake certain advisory responsibilities in compliance with the order.

Archaeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines (29 September 1983). These guidelines provide Federal agency personnel and others with standards and technical advice about archaeological and historic preservation activities and methods.

Treatment of Archaeological Properties; A Handbook (5 November 1980). This handbook is the advisory Council on Historic Preservation's guide to principles, procedures, and methods for treating archaeological properties to assist Federal agencies and SHPOs in meeting their responsibilities pursuant to 36 CFR 800.

D.9 SOCIOECONOMICS

Economic growth in the ROI depends, in part, on state, county, and community regulations and policies regarding housing and land use. These include regulations for residential construction, zoning ordinances, and related regulations. Standards for housing and Department of Defense housing programs (Section 801, build-lease, and Section 802, rental guarantee) may affect the development and allocation of housing for in-migrants.

The Secretary of Defense has been directed to encourage the use of solar energy or other forms of renewable energy for all types of military construction projects. The design of all new facilities is required to consider renewable energy when it has the potential for significant savings of energy derived from fossil fuels or is considered cost effective. Implementation is required when the renewable resource is found practical and economically feasible.

D.10 ENVIRONMENTAL JUSTICE

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. This order directs Federal agencies to address and consider the impacts on environmental and human health conditions in minority and low-income communities from Federal actions. The general purposes of this Executive Order are:

- To focus the attention of Federal agencies on human health and environmental conditions in minority communities and low-income communities with the goal of achieving environmental justice.

- To foster non-discrimination in Federal programs that substantially affect human health of the environment.

- To give minority communities and low-income communities greater opportunities for public participation in, and access to public information on, matters relating to human health and the environment.

Executive Order 13045 - Protection of Children From Environmental Health Risks and Safety Risks. This order was introduced in 1997 and requires Federal agencies' policies, programs, activities, and standards address environmental health risks and safety risks to children. Federal agencies are also required to make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children.

D.11 HAZARDOUS MATERIALS AND WASTES

Federal and state laws, policies, and regulations apply to activities involving hazardous materials. This regulatory framework provides the guidelines and management practices to minimize adverse impacts resulting from hazardous materials utilization. They include:

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980. This act provides for liability, compensation, clean-up, and emergency response for hazardous substances released into the environment and the clean-up of inactive hazardous waste disposal sites.

Hazardous and Solid Waste Amendments of 1984. These amendments prohibit the land disposal of hazardous wastes beyond specific dates. As of 8 May 1990, all hazardous wastes are prohibited from land disposal unless they first meet the Best Demonstrated Available Technology (BDAT) treatment standards.

Hazardous Materials Transportation Act (HMTA) and the Hazardous Materials Transportation Uniform Safety Act (HMTUSA). HMTA, and its 1990 amendments, and HMTUSA govern the transportation of hazardous materials. The Department of Transportation (DOT) administers these laws which govern packing, handling, spill reporting, routing, and transport container manufacturing. The 1990 amendments clarify and expand the Federal government's preemptive responsibility for regulating hazardous materials transport to include routing standards, registration, and permitting requirements, and financial responsibility requirements.

Resource Conservation and Recovery Act (RCRA) of 1984. This act regulates storage, transport, treatment, and disposal of hazardous waste that could have an adverse effect on the environment.

Solid Waste Disposal Act (SWDA) and Amendments of 1980. This act amends RCRA with additional regulation of energy and materials conservation and the establishment of a National Advisory Council.

Toxic Substances Control Act (TSCA) of 1976. This act specifies that all agencies of the Federal government must fully comply with its requirements. TSCA provides authority to require testing and regulation of chemical substances so as to protect human health and the environment from exposure to chemicals about which little is known.

D.12 SAFETY

The Air National Guard operates under an extensive set of regulations and procedures aimed at ensuring the safety of the public as well as Air National Guard personnel, facilities, and equipment. The regulations, procedures, plans and agreements most pertinent to the proposed action include:

Department of Defense Flight Information Publication (FLIP) indicates locations of potential hazards (e.g., bird aggregations, obstructions) and noise sensitive locations under military airspace and defines horizontal and/or vertical avoidance measures. The FLIP is updated monthly to present current conditions.

Explosive Safety Quantity Distance (ESQD) arcs have been developed for all military bases. ESQD arcs are established to regulate activity related to storage of ordnance; the arcs prohibit placement of habitable buildings in unsafe proximity to ordnance storage facilities. Unauthorized public access is strictly prohibited at the base and regulated by military police at established checkpoints located at each paved road providing access to the base; however, due to the extensive boundary, total protection from trespass is impossible.

APPENDIX E

ALTERNATIVE DEVELOPMENT PLAN

INTRODUCTION

The purpose of Appendix A is to present the rationale and process used to develop the selected plan in preparation for a Master Plan work session that took place at the ANG Readiness Center at Andrews AFB on 5-6 March 2001. At that meeting, the 167th AW presented the selected plan to ANG Readiness Center planners, programmers, and senior personnel with the goal of developing detailed Short- and Long-Range Development Plans for the installation. Later in the Master Plan process, short-range and long-range plans with detailed facility and road construction projects, demolitions plans, and phasing plans were developed. The selected plan and Short- and Long-Range Development Plans are discussed in Chapter 4 of this report.

Taking into account the needs, opportunities, and constraints identified above, a series of six conceptual alternatives were developed to guide the long-range development of the installation. These alternatives were initially developed during a four-day planning workshop that took place at Martinsburg ANG on 23-26 January 2001. At the conclusion of the workshop, one alternative was selected for more-detailed development and presentation at the ANG Readiness Center on 5-6 March 2001.

Each alternative was designed to provide Martinsburg ANG with a road map for accommodating long-range mission requirements associated with the beddown of a C-5 strategic airlift mission. In addition, the Master Plan will need to address existing needs, opportunities, and constraints identified earlier in this report. These needs, opportunities, and constraints effectively serve as design principles to the Master Plan:

- Evaluate the ability of Martinsburg ANG and Eastern West Virginia Regional Airport to support the beddown of a C-5 strategic airlift mission.
- Consolidate similar functions under one roof where practical.
- Improve the on-installation circulation system as well as links to the regional transportation system.
- Replace aging facilities during the span of the Master Plan timeframe.
- Operate the installation in conjunction with natural and operational constraints.

Each alternative was developed under the assumption that 16 C-5 aircraft will be assigned to the installation. Each alternative assumed that three C-5 aircraft will be parked in each of three aircraft maintenance docks—the main hangar, fuel cell, and corrosion control docks. As a result, only 13 C-5 aircraft will need to be parked on the aircraft parking ramp.

Another assumption used in each alternative is the relocation of the principal entrance to the installation from the east side to the west side of the installation. Under this assumption, principal access to the installation would be provided from U.S. 11. Also, each alternative retains the present installation entrance as a secondary

entrance for use during unit training assembly (UTA).

In five of the six alternatives (Alternatives 1 through 5) the crosswind runway, runway 17/35, was closed to accommodate ramp space associated with the C-5. In Alternative 6, runway 17/35 remains open. In each of the six alternatives, the assault strip is closed to accommodate the expanded C-5 ramp.

To properly site facilities on the installation, facility requirements supplied by the ANG Readiness Center were adapted to local conditions. These facility requirements are largely based on Air Force Instruction (AFI) 32-1024. Exhibit 4.1t indicates category codes, and facility authorizations for all functions in order to support the C-5 mission.

Later, these facility requirements will be used to identify specific construction, addition/alteration, and demolition projects in support of the selected alternative and short- and long-range development plans.

ALTERNATIVE 1

Exhibit A.1m provides an illustration of Alternative 1. The most observable characteristic of this conceptual alternative is the "L-shaped" aircraft parking ramp. Under this scenario, nine aircraft would be parked parallel to the principle runway, 08/26, while four additional aircraft would be parked in a westward orientation over the current location of the crosswind runway, 17/35. The nine parking spaces paralleling runway 08/26 would necessitate the displacement of the taxiway currently serving the installation's aircraft parking ramp. A new taxiway would be developed in conjunction with the new ramp. The latter four aircraft parking spaces would be oriented in an optimal manner relative to the prevailing wind direction at the installation.

To accommodate the facility requirements of the C-5, new aircraft operations and maintenance facilities would constructed on a redeveloped flight line. An aircraft maintenance mall consisting of a hangar, corrosion control dock, and two-story maintenance shop complex is proposed. This facility would be complemented by a stand-alone fuel cell dock to the south. To the north, Buildings 128, 120, 119, and 125 would remain. Building 128 would be reused as an aerial port and passenger terminal (PAX), while Building 120 would remain as the squadron operation facility. Building 119 would be reused by a number of functional areas, including an engine shop, roads and grounds building, and base civil engineering storage facility. Building 125 would remain in use as a clinic.

At the north end of the aircraft parking ramp, a new base supply complex will be constructed. In this same area, Building 111 would be reused as a troop deployment center.

In Alternative 1, the principal entrance to the installation would be relocated to the west side of the installation. The main gate would be relocated to the northwest corner of the installation, and a new cross-installation access road would be developed.

As with the flight line, many facilities on the northern half of the installation would be retained, including the POL, munitions maintenance, vehicle maintenance complexes, as well as the aero-medical training facility.

ALTERNATIVE 2

Under Alternative 2, the aircraft parking ramp would be located on the south side of the installation with aircraft parked in an orientation perpendicular to runway 08/26. Exhibit A.2m illustrates in conceptual fashion Alternative 2.

As with Alternative 1, future flight line development would be focused to the southwest of the present flight line. In this area, a new aircraft maintenance mall would be developed on the present site of the air traffic control tower and runway 17/35. Unlike Alternative 1, the fire station will be ideally sited to provide access to the remainder of Eastern West Virginia Regional Airport's airside facilities. Fire safety vehicles will not be required to maneuver through the aircraft parking ramp under this scenario.

Access to the installation would be provided by a new entrance road that would use a more-southerly access point that indicated on Alternative 1. This route enters U.S. 11 at a less-congested portion of this important north-south thoroughfare. After entering the installation, a

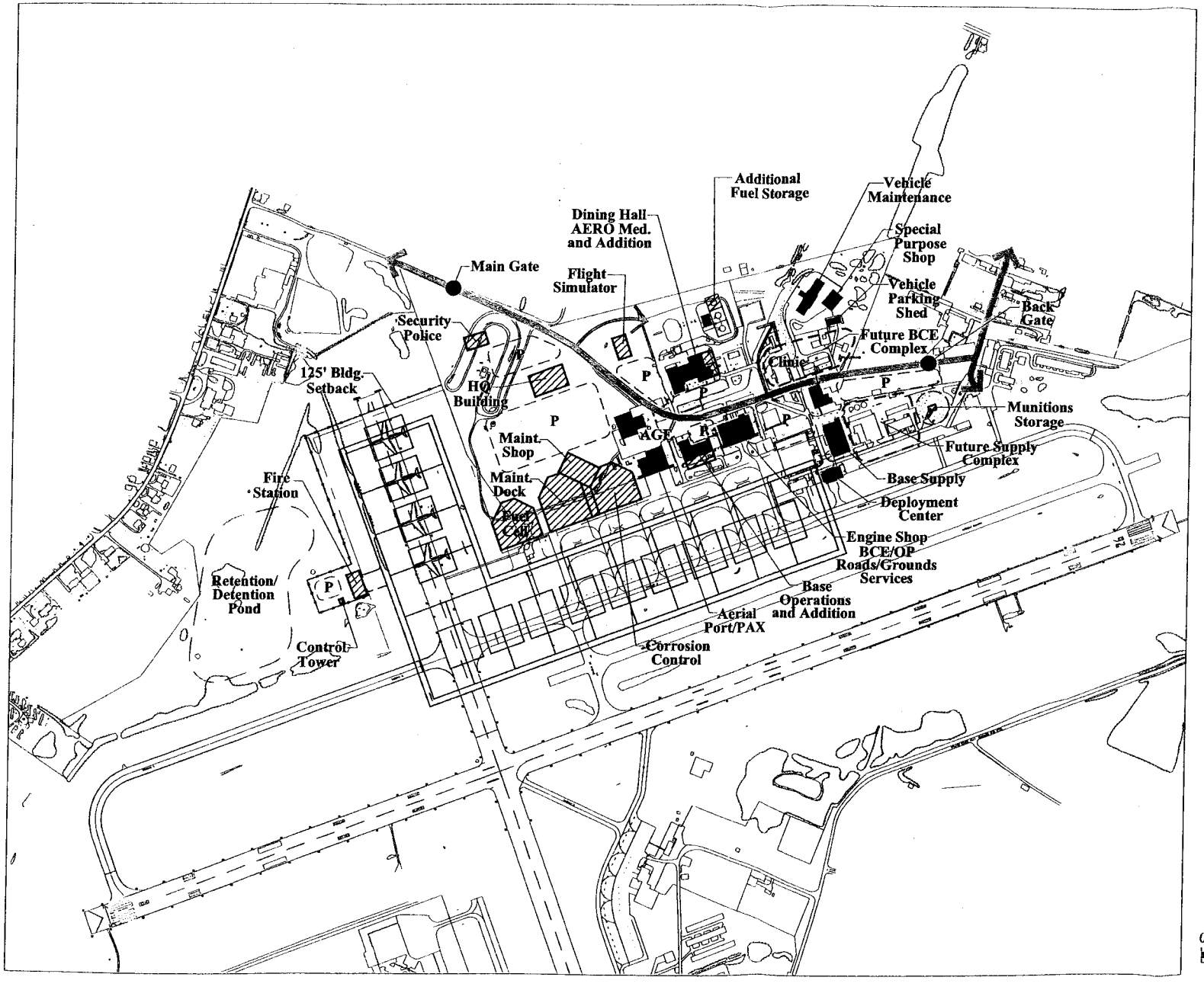


Exhibit A.1m

ALTERNATIVE ONE

West Virginia Air National Guard

Martinsburg, West Virginia

LEGEND

EXISTING FACILITIES

PROPOSED FACILITIES

0 600 1200

GRAPHIC SCALE IN FEET

N

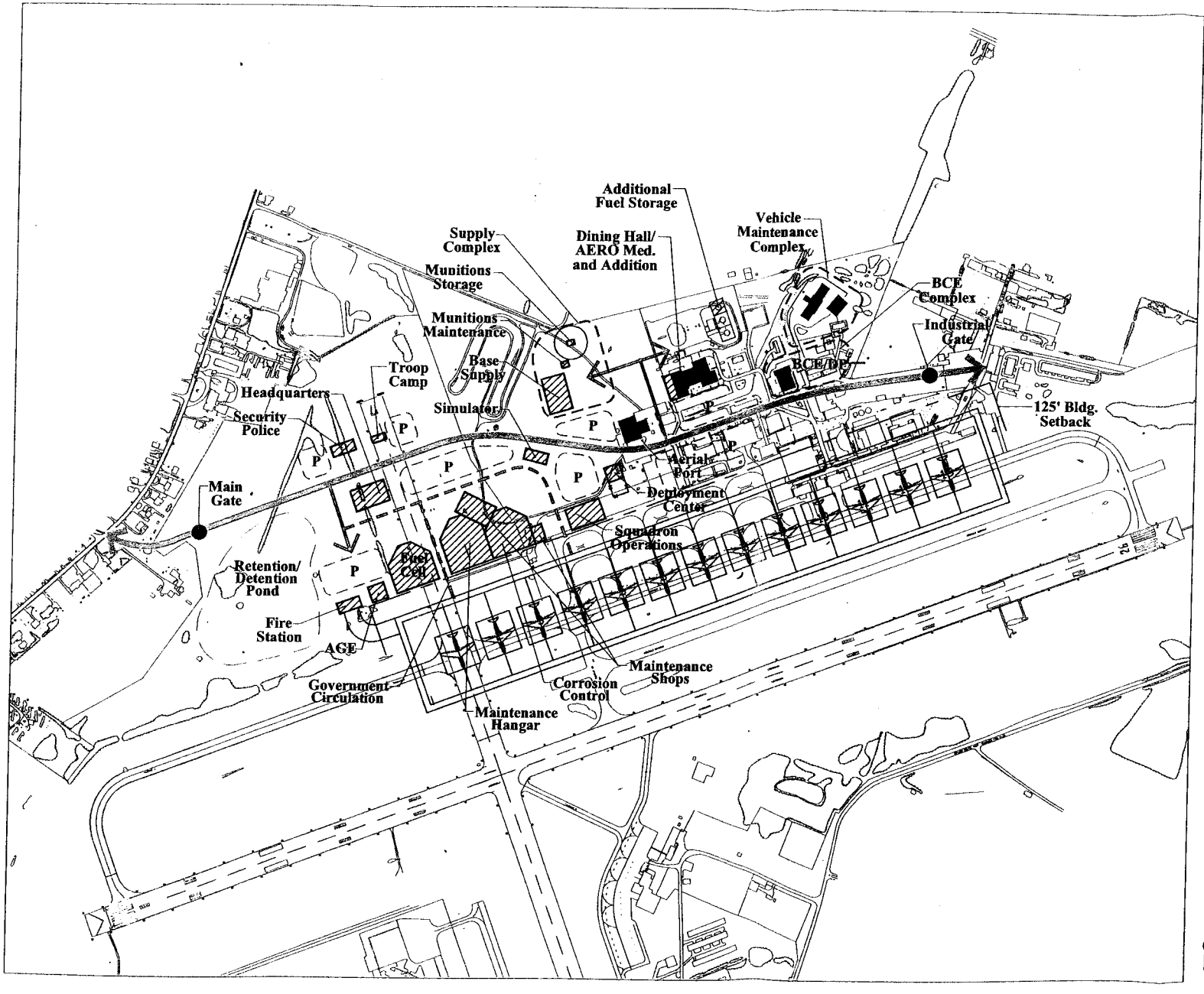


Exhibit A.2m

ALTERNATIVE TWO

West Virginia Air National Guard

Martinsburg, West Virginia

LEGEND

EXISTING FACILITIES

PROPOSED FACILITIES

0 600 1200

GRAPHIC SCALE IN FEET

N

continuous cross-installation access road would provide direct access to most facilities.

North of the cross-installation road, mission support and industrial operations would be focused. An industrial core would be developed on the northeastern corner of the installation in the vicinity of the existing POL and vehicle maintenance complex. A new supply complex would be developed west of the POL area on the northern boundary of the installation.

ALTERNATIVE 3

Exhibit A.3m illustrates conceptually Alternative 3. Alternative 3's aircraft parking ramp is a hybrid of parking spaces oriented in a fashion both parallel and perpendicular to the principal runway, 08/26. This allows for eight spaces to be pointed in a southwesterly direction that is ideal relative to prevailing wind patterns at Martinsburg ANG. This hybrid pattern also allows for the aircraft maintenance mall—the main hangar, shop area, and fuel cell and corrosion control docks—to be situated in a manner so that they are extremely close to the new aircraft parking ramp.

Alternative 3 uses a cross-installation access road similar to Alternative 2, though the more-northerly access point onto U.S. 11 is used in this scenario. The future headquarters of the 167th AW, the simulator, base supply, and security policy/military police functions would all be located in close proximity to the new main gate to the installation.

Most industrial functions would be focused on the northeast corner of the installation under this alternative.

ALTERNATIVE 4

Exhibit A.4m illustrates conceptually the recommendations of Alternative 4. Under this alternative, the aircraft parking ramp would be oriented in a "two-by-two" pattern with the C-5 aircraft oriented into the prevailing wind pattern at the installation. As with Alternatives 1 and 2, future flight line development under Alternative 4 would be located to the southwest of the present flight line. The new aircraft maintenance mall would be situated on the present site of the running track and runway 17/35.

Command and support functions would be focused near the new main gate located on the south side of the installation. Facilities oriented to the public—the credit union/base exchange, and simulator—would be site so that visitor would not need to venture into the core of the installation further to the north.

A cross-installation access road would provide direct access to most facilities within the installation. This road would also serve as division between facilities designed to house mission function on the south side of the road, and industrial and support functions located to the north.

ALTERNATIVE 5

Alternative 5 is essentially a variation of Alternative 4. Exhibit A.5m illustrates conceptually this alternative. As with Alternative 4, aircraft parking in this scenario would be laid-out in a two-by-two pattern parallel to runway 08/26. The aircraft maintenance mall would remain in the same location indicated in Alternative 4.

Alternative 5 investigates the option of locating the base civil engineering complex on the northeast corner of the installation. Also in this alternative, the headquarters facility and other command and support functions are situated further to the east of the main gate area.

ALTERNATIVE 6

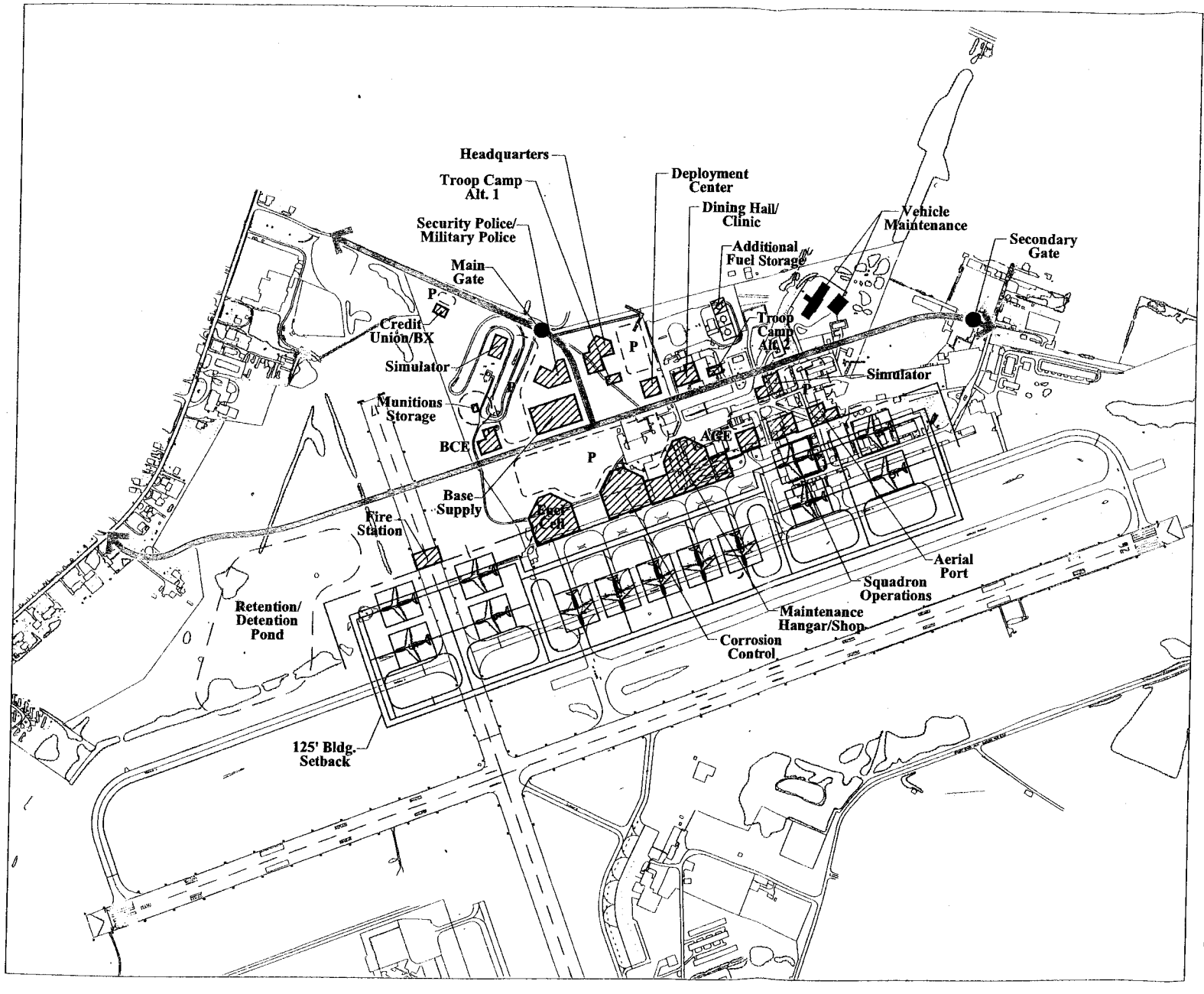
Alternative 6 assumes that the crosswind runway, runway 17/35, would remain open to serve general aviation traffic at EWVRA. Alternative 6 is illustrated in Exhibit A.6m. As a result, the 167th AW's operations would be split between a western support campus housing mission support activities such as the headquarters, security police, flight simulator, fire station, and control tower; and an eastern campus housing aircraft maintenance and operations, and industrial activities. Aircraft operations and maintenance functions would be focused on a new flightline area near the intersection of runways 08/26 and 17/35. The two campuses would be linked by a cross-installation roadway that would bend northward and around the runway 17/35 clearzone.

Exhibit A.3m

ALTERNATIVE THREE

West Virginia Air National Guard

Martinsburg, West Virginia



LEGEND

- EXISTING FACILITIES
- PROPOSED FACILITIES

0 600 1200

GRAPHIC SCALE IN FEET

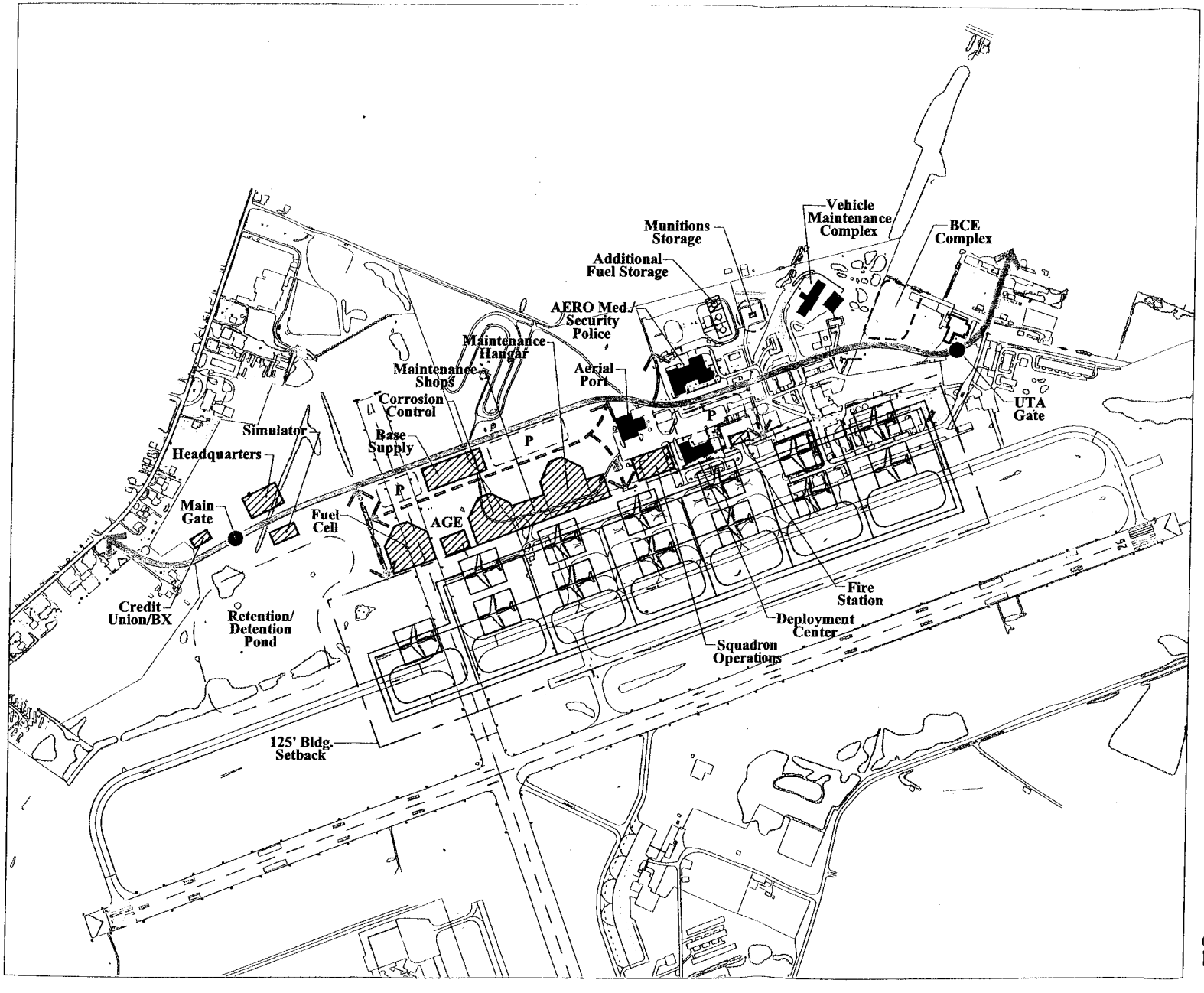


Exhibit A.4m

ALTERNATIVE FOUR

West Virginia Air National Guard

Martinsburg, West Virginia

LEGEND

EXISTING FACILITIES

PROPOSED FACILITIES

0 *600* *1200*

GRAPHIC SCALE IN FEET

N

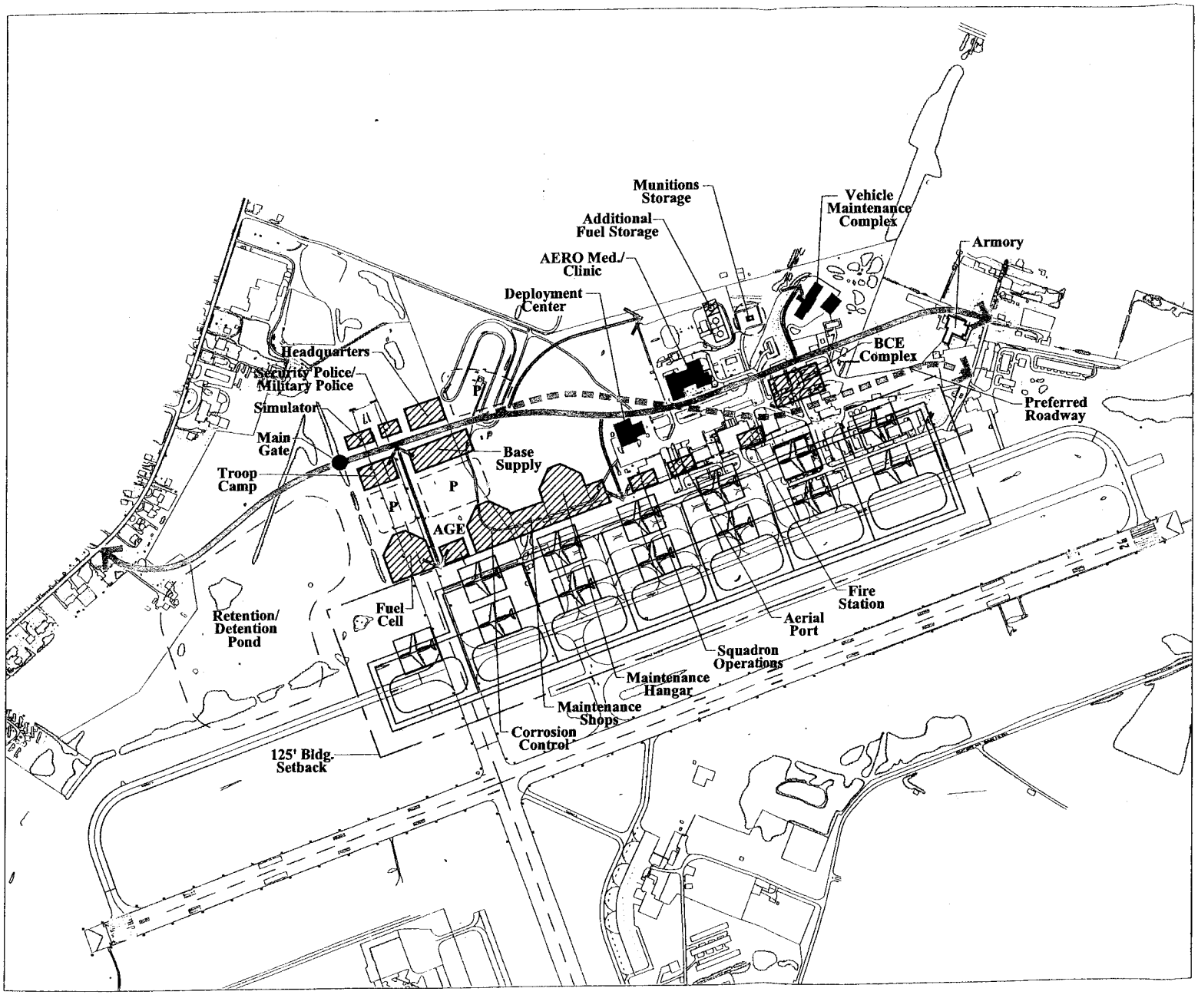


Exhibit A.5m

ALTERNATIVE FIVE

West Virginia Air National Guard

Martinsburg, West Virginia

LEGEND

EXISTING FACILITIES

PROPOSED FACILITIES

0 600 1200

GRAPHIC SCALE IN FEET

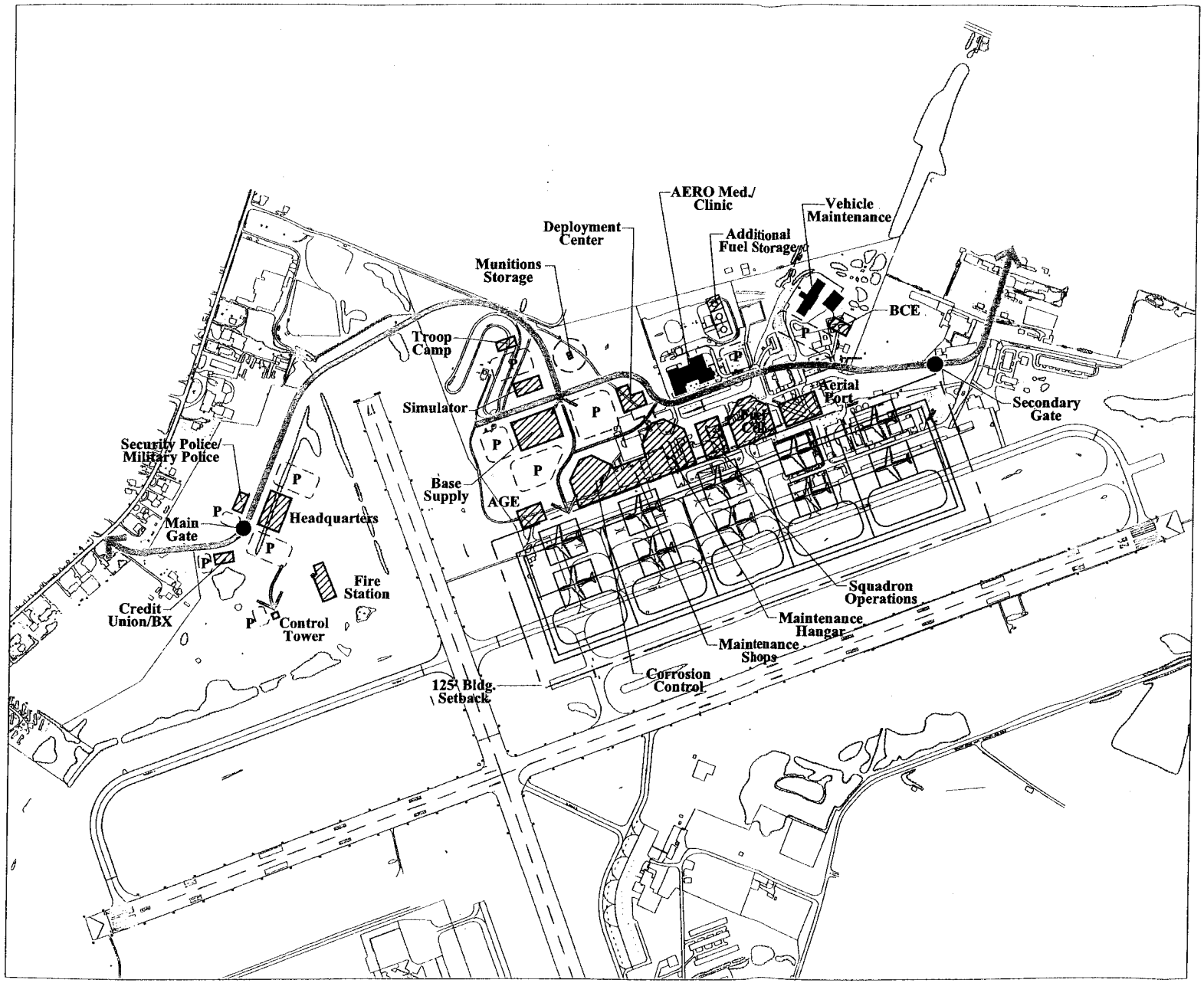


Exhibit A.6m

ALTERNATIVE SIX

West Virginia Air National Guard

Martinsburg, West Virginia

LEGEND

EXISTING FACILITIES

PROPOSED FACILITIES

0 600 1200

GRAPHIC SCALE IN FEET

Under this conceptual alternative, 13 C-5 aircraft would be parked in a single-rowed aircraft parking ramp. The ramp would extend from the primary surface and height clearances of runway 17/35 northeast and end at a point near the northeastern end of runway 08/26. Unlike the other alternatives examined, Alternative 6 would require the acquisition of non-EWVRA property in the vicinity of Kelleys Island Road near the existing main gate to Martinsburg ANG. While some EWVRA property would need to be acquired to support the development of the western support campus, the volume of land necessary is not as great as that required in Alternatives 1 through 5.

ALTERNATIVE EVALUATION CRITERION

Exhibit A.7t provides a summary of criterion used to evaluate each of the six conceptual alternatives presented the Command Staff of the 167th AW and ANG Readiness Center personnel.

Exhibit A.7t. *Alternative Evaluation Criterion*

	Positive	Negative
Alternative 1	▪ Four parking spaces oriented ideally to prevailing wind direction. ▪ Retains most facilities relative to other alternatives.	▪ L-shaped ramp configuration precludes future development to southwest. ▪ Awkward circulation pattern at secondary gate. ▪ Flight line includes non-aircraft maintenance and operations functions.
Alternative 2	▪ Cross-installation access road provides seamless access across the installation. ▪ Well-defined industrial area on northeast corner of installation.	▪ Southeast corner of installation underutilized. ▪ Distance between flight line and supply complex and aerial port very large. ▪ Aircraft parking orientation not ideal relative to prevailing wind pattern.
Alternative 3	▪ Compact aircraft parking ramp orientation. ▪ Flight line reserved for appropriate aircraft maintenance/operations functions.	▪ Northward access point to U.S. 11 not ideal. ▪ Base supply on opposite side of cross-installation access road. ▪ Industrial operations located near command and support functions on north side of installation/new main gate area.
Alternative 4	▪ Parking orientation ideal relative to prevailing wind pattern. ▪ Base supply complex ideally located. ▪ Public areas separated from core installation. ▪ Ideal location for access to U.S. 11.	▪ May require acquisition of West Virginia Army Guard armory land. ▪ Aerial port located too far from flight line.
Alternative 5	▪ Parking orientation ideal relative to prevailing wind pattern. ▪ Base supply location ideal relative to front gate and flight line.	▪ Deployment center not ideally located. ▪ North flight line not reserved for aircraft maintenance/operations functions.
Alternative 6	▪ Crosswind runway 17/35 remains intact to support general aviation traffic of EWVRA. ▪ Nine existing facilities re-used under this alternative.	▪ 167th AW operations would be split between a western support campus and an eastern operations campus. ▪ Necessitates acquisition of non-EWVRA property east of existing installation boundary. ▪ Headquarters, security police, and security police functions isolated from main installation development area.

APPENDIX F

DISCUSSION OF NOISE AND ITS EFFECT ON THE ENVIRONMENT

C.1 NOISE

C.1.1 General

Noise, often defined as unwanted sound, is one of the most common environmental issues associated with aircraft operations. Of course, aircraft are not the only sources of noise in an urban or suburban surrounding, where interstate and local roadway traffic, rail, industrial, and neighborhood sources also intrude on the everyday quality of life. Nevertheless, aircraft are readily identifiable to those affected by their noise and are typically singled out for special attention and criticism. Consequently, aircraft noise problems often dominate analyses of environmental impacts.

Sound is a physical phenomenon consisting of minute vibrations which travel through a medium, such as air, and are sensed by the human ear. Whether that sound is interpreted as pleasant (for example, music) or unpleasant (for example, aircraft noise) depends largely on the listener's current activity, past experience, and attitude toward the source of that sound. It is often true that one person's music is another person's noise.

The measurement and human perception of sound involves two basic physical characteristics – intensity and frequency. Intensity is a measure of the acoustic energy of the sound vibrations and is expressed in terms of sound pressure. The higher the sound pressure, the more energy carried by the sound and the louder the perception of that sound. The second important physical characteristic is sound frequency which is the number of times per second the air vibrates or oscillates. Low-frequency sounds are characterized as rumbles or roars, while high-frequency sounds are typified by sirens or screeches.

The loudest sounds which can be detected comfortably by the human ear have intensities which are 1,000,000,000,000 times larger than those of sounds which can just be detected. Because of this vast range, any attempt to represent the intensity of sound using a linear scale becomes very unwieldy. As a result, a logarithmic unit known as the decibel (abbreviated dB) is used to represent the intensity of a sound. Such a representation is called a sound level.

A sound level of 0 dB is approximately the threshold of human hearing and is barely audible under extremely quiet listening conditions. Normal speech has a sound level of approximately 60 dB. Sound levels above about 120 dB begin to be felt inside the human ear as discomfort and eventually pain at still higher levels.

Because of the logarithmic nature of the decibel unit, sound levels cannot be added or subtracted directly and are somewhat cumbersome to handle mathematically. However, some simple rules of thumb are useful in dealing with sound levels. First, if a sound's intensity is

doubled, the sound level increases by 3 dB, regardless of the initial sound level. Thus, for example:

60 dB + 60 dB = 63 dB, and
80 dB + 80 dB = 83 dB.

The total sound level produced by two sounds of different levels is usually only slightly more than the higher of the two. For example:

60.0 dB + 70.0 dB = 70.4 dB.

Because the addition of sound levels behaves differently than that of ordinary numbers, such addition is often referred to as "decibel addition" or "energy addition". The latter term arises from the fact that what we are really doing when we add decibel values is first converting each decibel value to its corresponding acoustic energy, then adding the energies using the normal rules of addition, and finally converting the total energy back to its decibel equivalent.

An important facet of decibel addition arises later when the concept of time-average sound levels is introduced to explain Day-Night Average Sound Level. Because of the logarithmic units, the time-average sound level is dominated by the louder levels which occur during the averaging period. As a simple example, consider a sound level which is 100 dB and lasts for 30 seconds, followed by a sound level of 50 dB which also lasts for 30 seconds. The time-average sound level over the total 60-second period is 97 dB, not 75 dB.

The minimum change in the sound level of individual events which an average human ear can detect is about 3 dB. A change in sound level of about 10 dB is usually perceived by the average person as a doubling (or halving) of the sound's loudness, and this relation holds true for loud sounds and for quieter sounds. A decrease in sound level of 10 dB actually represents a 90 percent decrease in sound intensity but only a 50 percent decrease in perceived loudness because of the nonlinear response of the human ear (similar to most human senses).

Sound frequency is measured in terms of cycles per second (cps), or hertz (Hz), which is the preferred scientific unit for cps. The normal human ear can detect sounds which range in frequency from about 20 Hz to about 15,000 Hz. All sounds in this wide range of frequencies, however, are not heard equally well by the human ear, which is most sensitive to frequencies in the 1000 to 4000 Hz range. In measuring community noise, this frequency dependence is taken into account by adjusting the very high and very low frequencies to approximate the human ear's lower sensitivity to those frequencies. This is called "A-weighting" and is commonly used in measurements of community environmental noise.

Sound levels measured using A-weighting are most properly called A-weighted sound levels while sound levels measured without any frequency weighting are most properly called sound levels. However, since most environmental impact analysis documents deal only with A-weighted sound levels, the adjective "A-weighted" is often omitted, and A-weighted sound levels are referred to simply as sound levels. In some instances, the author will indicate that the levels have been A-weighted by using the abbreviation dBA or dB(A), rather than the abbreviation dB, for decibel. As long as the use of A-weighting is understood to be used, there is no difference implied by the terms "sound level" and "A-weighted sound level" or by the units dB, dBA, and dB(A).

In this document all sound levels are A-weighted sound levels and the adjective "A-weighted" has been omitted.

Sound levels do not represent instantaneous measurements but rather averages over short periods of time. Two measurement time periods are most common – one second and one-eighth of a second. A measured sound level averaged over one second is called a slow response sound level; one averaged over one-eighth of a second is called a fast response sound level. Most environmental noise studies use slow response measurements, and the adjective "slow response" is usually omitted. It is easy to understand why the proper descriptor "slow response A-weighted sound level" is usually shortened to "sound level" in environmental impact analysis documents.

C.1.2 Noise Metrics

A "metric" is defined as something "of, involving, or used in measurement." As used in environmental noise analyses, a metric refers to the unit or quantity which quantitatively measures the effect of noise on the environment. Noise studies have typically involved a confusing proliferation of noise metrics as individual researchers have attempted to understand and represent the effects of noise. As a result, past literature describing environmental noise or environmental noise abatement has included many different metrics.

Recently, however, various federal agencies involved in environmental noise mitigation have agreed on common metrics for environmental impact analysis documents, and both the Department of Defense and the Federal Aviation Administration have specified those which should be used for federal aviation noise assessments. These metrics are as follows.

C.1.2.1 Maximum Sound Level

The highest A-weighted sound level measured during a single event in which the sound level changes value as time goes on (e.g., an aircraft overflight) is called the maximum A-weighted sound level or maximum sound level, for short. It is usually abbreviated by ALM, L_{max} or L_{Amax} .

The maximum sound levels of typical events are shown in Figure C-1. The maximum sound level is important in judging the interference caused by a noise event with conversation, TV or radio listening, sleep, or other common activities.

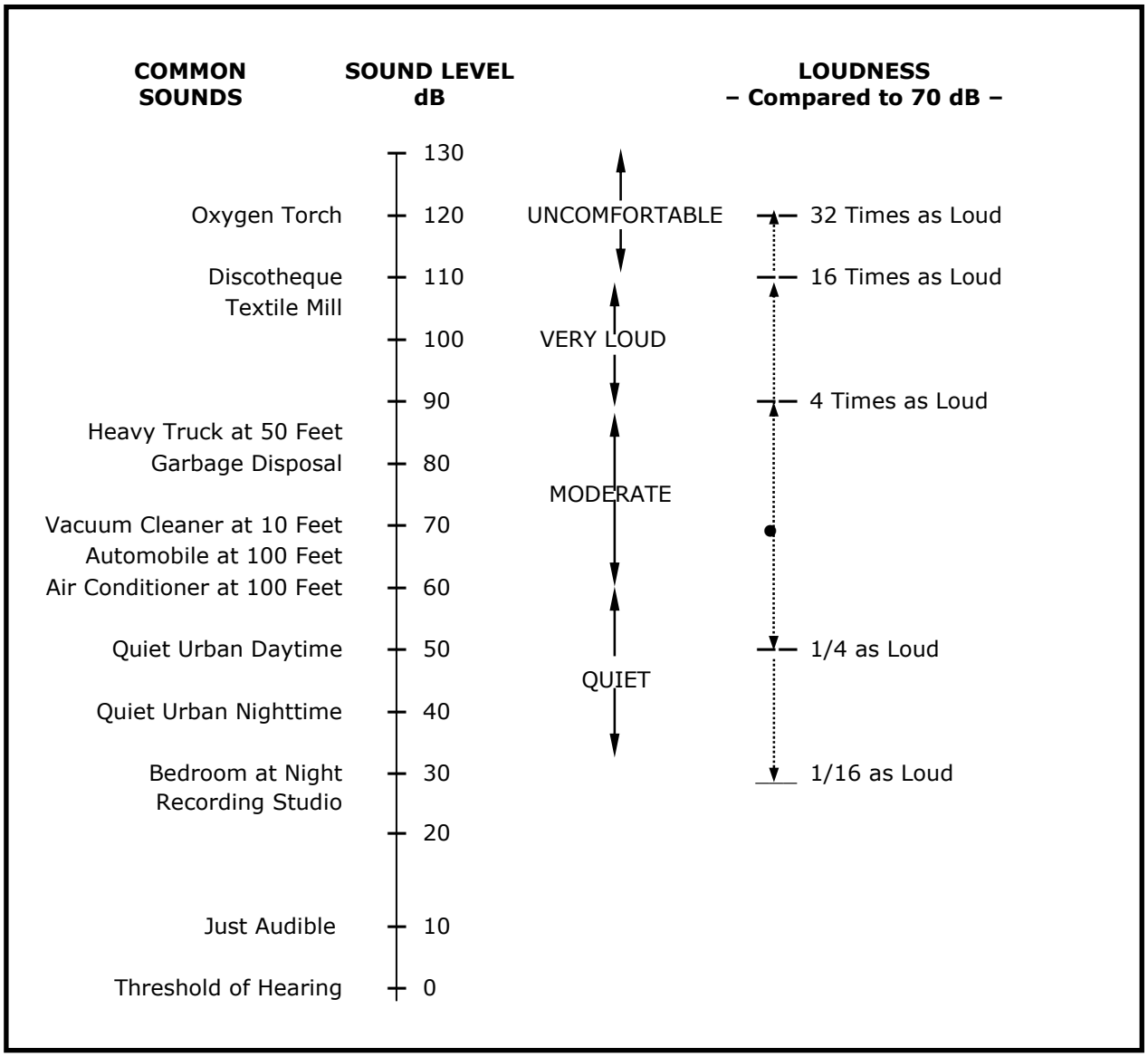
C.1.2.2 Sound Exposure Level

Individual time-varying noise events have two main characteristics – a sound level which changes throughout the event and a period of time during which the event is heard. Although the maximum sound level, described above, provides some measure of the intrusiveness of the event, it alone does not completely describe the total event. The period of time during which the sound is heard is also significant. The Sound Exposure Level (abbreviated SEL or L_{AE}) combines both of these characteristics into a single metric.

Sound Exposure Level is a logarithmic measure of the total acoustic energy transmitted to the listener during the event. Mathematically, it represents the sound level of the constant sound that would, in one second, generate the same acoustic energy as did the actual time-varying noise event. Since aircraft overflights usually last longer than one second, the Sound Exposure Level of an overflight is usually greater than the maximum sound level of the overflight.

Note that sound exposure level is a composite metric which represents both the intensity of a sound and its duration. It does not directly represent the sound level heard at any given time, but rather provides a measure of the net impact of the entire acoustic event. It has been well established in the scientific community that Sound Exposure Level measures this impact much more reliably than just the maximum sound level.

Because the Sound Exposure Level and the maximum sound level are both A-weighted sound levels expressed in decibels, there is sometimes confusion between the two, so the specific metric used should be clearly stated.



Source: *Handbook of Noise Control*, C.M. Harris, Editor, McGraw-Hill Book Co., 1979, and Ref. A5.

Figure C-1. Typical A-Weighted Sound Levels of Common Sounds.

C.1.2.3 Day-Night Average Sound Level

Time-average sound levels are measurements of sound levels which are averaged over a specified length of time. These levels provide a measure of the average sound energy during the measurement period.

For the evaluation of community noise effects, and particularly aircraft noise effects, the Day-Night Average Sound Level (abbreviated DNL or L_{dn}) is used. Day-Night Average Sound Level averages aircraft sound levels at a location over a complete 24-hour period, with a 10-

decibel adjustment added to those noise events which take place between 10:00 p.m. and 7:00 a.m. (local time) the following morning. This 10-decibel "penalty" represents the added intrusiveness of sounds which occur during normal sleeping hours, both because of the increased sensitivity to noise during those hours and because ambient sound levels during nighttime are typically about 10 dB lower than during daytime hours.

Ignoring the 10-decibel nighttime adjustment for the moment, Day-Night Average Sound Level may be thought of as the continuous A-weighted Sound Level which would be present if all of the variations in sound level which occur over a 24-hour period were smoothed out so as to contain the same total sound energy.

Day-Night Average Sound Level provides a single measure of overall noise impact, but does not provide specific information on the number of noise events or the individual sound levels which occur during the day. For example, a Day-Night Average Sound Level of 65 dB could result from a very few noisy events, or a large number of quieter events.

As noted earlier for Sound Exposure Level, Day-Night Average Sound Level does not represent the sound level heard at any particular time, but rather represents the total sound exposure. Scientific studies and social surveys which have been conducted to appraise community annoyance to all types of environmental noise have found the Day-Night Average Sound Level to be the best measure of that annoyance. Its use is endorsed by the scientific community (References A1 through A5).

There is, in fact, a remarkable consistency in the results of attitudinal surveys about aircraft noise conducted in different countries to find the percentages of groups of people who express various degrees of annoyance when exposed to different levels of Day-Night Average Sound Level. This is illustrated in Figure C-2, which summarizes the results of a large number of social surveys relating community responses to various types of noises, measured in Day-Night Average Sound Level.

Reference A6, from which Figure C-2 was taken, was published in 1978. A more recent study has reaffirmed this relationship (Reference A7). In general, correlation coefficients of 0.85 to 0.95 are found between the percentages of groups of people highly annoyed and the level of average noise exposure. The correlation coefficients for the annoyance of individuals are relatively low, however, on the order of 0.5 or less. This is not surprising, considering the varying personal factors which influence the manner in which individuals react to noise. Nevertheless, findings substantiate that community annoyance to aircraft noise is represented quite reliably using Day-Night Average Sound Level.

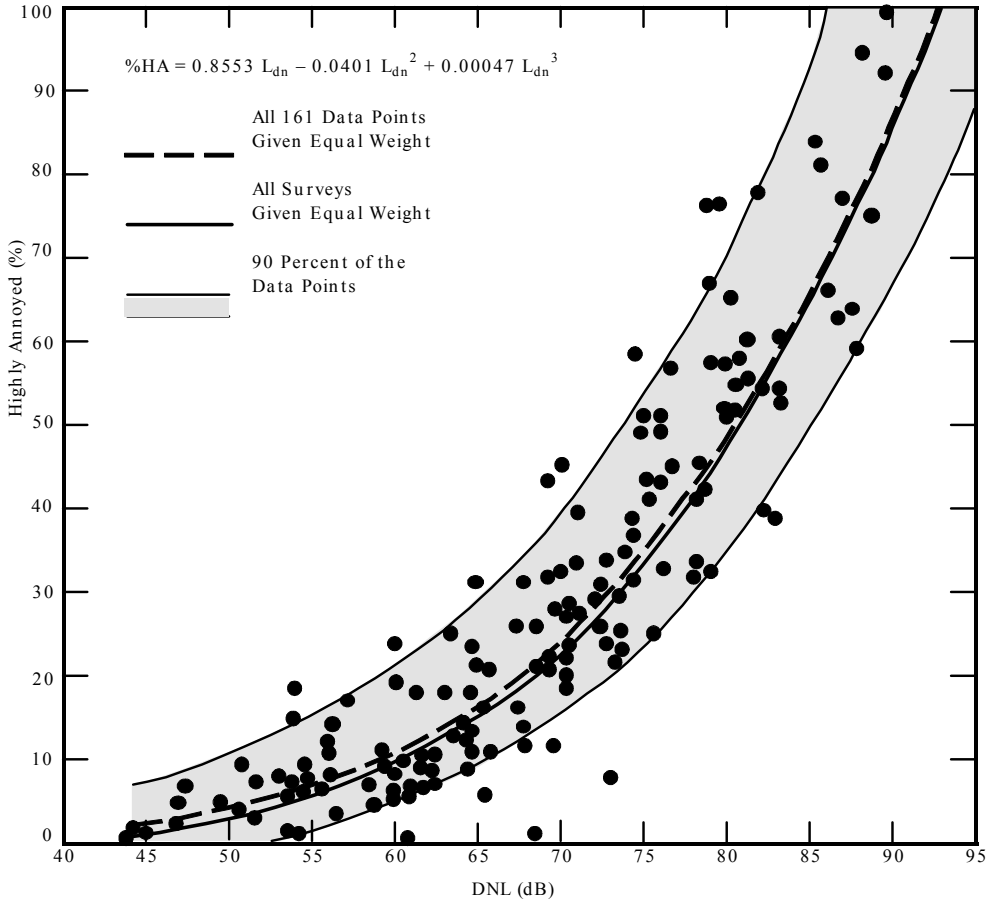


Figure C-2. Community Surveys of Noise Annoyance (Schulz, 1978)

This relation between community annoyance and time-average sound level has been confirmed, even for infrequent aircraft noise events. Reference A8 reported the reactions of individuals in a community to daily helicopter overflights, ranging from one to 32 per day. The stated reactions to infrequent helicopter overflights correlated quite well with the daily time-average sound levels over this range of numbers of daily noise events.

The use of Day-Night Average Sound Level has been criticized recently as not accurately representing community annoyance and land-use compatibility with aircraft noise. Much of that criticism stems from a lack of understanding of the basis for the measurement or calculation of L_{dn} . One frequent criticism is based on the inherent feeling that people react more to single noise events and not as much to "meaningless" time-average sound levels.

In fact, a time-average noise metric, such as L_{dn} , takes into account both the noise levels of all individual events which occur during a 24-hour period and the number of times those

events occur. As described briefly above, the logarithmic nature of the decibel unit causes the noise levels of the loudest events to control the 24-hour average.

As a simple example of this characteristic, consider a case in which only one aircraft overflight occurs in daytime during a 24-hour period, creating a sound level of 100 dB for 30 seconds. During the remaining 23 hours, 59 minutes, and 30 seconds of the day, the ambient sound level is 50 dB. The Day-Night Average Sound Level for this 24-hour period is 65.5 dB. Assume, as a second example, that ten such 30-second overflights occur in daytime hours during the next 24-hour period, with the same ambient sound level of 50 dB during the remaining 23 hours and 55 minutes of the day. The Day-Night Average Sound Level for this 24-hour period is 75.4 dB. Clearly, the averaging of noise over a 24-hour period does not ignore the louder single events and tends to emphasize both the sound levels and number of those events. This is the basic concept of a time-average sound metric, and specifically the Day-Night Average Sound Level.

C.1.2.4 Onset-Rate Adjusted Day-Night Average Sound Level

Aircraft operations along low-altitude Military Training Routes (MTRs) and in Military Operating Areas (MOAs) and Restricted Areas/Ranges generate a noise environment different from other community noise environments. Overflights can be highly sporadic, ranging from many (e.g., ten per hour) to few (less than one per week). This situation differs from most community noise environments in which noise tends to be continuous or patterned.

Individual military overflight events also differ from typical community noise events, because of the low-altitude and high-airspeed characteristics of military aircraft. These characteristics result in aircraft that exhibit a rate of increase in sound level (onset rate) of up to 30 dB per second. The Day-Night Average Sound Level metric is adjusted to account for the "surprise" effect of the onset rate of aircraft noise on humans with an adjustment ranging up to 11 dB added to the normal Sound Exposure Level (Reference A9). Onset rates between 15 to 150 dB per second require an adjustment of from 0 to 11 dB, while onset rates below 15 dB per second require no adjustment. The adjusted Day-Night Average Sound Level is designated as Onset-Rate Adjusted Day-Night Average Sound Level (abbreviated L_{dnr}). Because of the sporadic occurrences of aircraft overflights along MTRs, in MOAs and Restricted Areas/Ranges, the number of average daily operations is determined from the calendar month with the highest number of operations in each area. This monthly average is denoted L_{dnmr} .

C.2 NOISE EFFECTS

C.2.1 Hearing Loss

Noise-induced hearing loss is probably the best defined of the potential effects of human exposure to excessive noise. Federal workplace standards for protection from hearing loss allow a time-average level of 90 dB over an 8-hour work period, or 85 dB averaged over a 16-hour period. Even the most protective criterion (no measurable hearing loss for the most sensitive portion of the population at the ear's most sensitive frequency, 4000 Hz, after a 40-year exposure) suggests a time-average sound level of 70 dB over a 24-hour period. Since it is unlikely that airport neighbors will remain outside their homes 24 hours per day for extended periods of time, there is little possibility of hearing loss below a Day-Night Average Sound Level of 75 dB, and this level is extremely conservative.

C.2.2 Nonauditory Health Effects

Nonauditory health effects of long-term noise exposure, where noise may act as a risk factor, have never been found to occur at levels below those protective against noise-induced hearing loss, described above. Most studies attempting to clarify such health effects have found that noise exposure levels established for hearing protection will also protect against any potential nonauditory health effects, at least in workplace conditions. The best scientific summary of these findings is contained in the lead paper at the National Institutes of Health Conference on Noise and Hearing Loss, held on 22–24 January 1990 in Washington, D.C.:

> "The nonauditory effects of chronic noise exposure, when noise is suspected to act as one of the risk factors in the development of hypertension, cardiovascular disease, and other nervous disorders, have never been proven to occur as chronic manifestations at levels below these criteria (an average of 75 dBA for complete protection against hearing loss for an eight-hour day). At the 1988 International Congress on Noise as a Public Health Problem, most studies attempting to clarify such health effects did not find them at levels below the criteria protective of noise-induced hearing loss, and even above these criteria, results regarding such health effects were ambiguous. Consequently, one comes to the conclusion that establishing and enforcing exposure levels protecting against noise-induced hearing loss would not only solve the noise-induced hearing loss problem but also any potential nonauditory health effects in the work place." (Reference A10; parenthetical wording added for clarification.)

Although these findings were directed specifically at noise effects in the work place, they are equally applicable to aircraft noise effects in the community environment. Research studies regarding the nonauditory health effects of aircraft noise are ambiguous, at best, and often

contradictory. Yet, even those studies which purport to find such health effects use time-average noise levels of 75 dB and higher for their research.

For example, in an often-quoted paper, two UCLA researchers apparently found a relation between aircraft noise levels under the approach path to Los Angeles International Airport (LAX) and increased mortality rates among the exposed residents by using an average noise exposure level greater than 75 dB for the "noise-exposed" population (Reference A11). Nevertheless, three other UCLA professors analyzed those same data and found no relation between noise exposure and mortality rates (Reference A12).

As a second example, two other UCLA researchers used this same population near LAX to show a higher rate of birth defects in 1970–1972 when compared with a control group residing away from the airport (Reference A13). Based on this report, a separate group at the U.S. Centers for Disease Control performed a more thorough study of populations near Atlanta's Hartsfield International Airport (ATL) for 1970–1972 and found no relation in their study of 17 identified categories of birth defects to aircraft noise levels above 65 dB (Reference A14).

In summary, there is no scientific basis for a claim that potential health effects exist for aircraft time-average sound levels below 75 dB.

C.2.3 Annoyance

The primary effect of aircraft noise on exposed communities is one of annoyance. Noise annoyance is defined by the U.S. Environmental Protection Agency as any negative subjective reaction on the part of an individual or group (Reference A3). As noted in the discussion of Day-Night Average Sound Level above, community annoyance is best measured by that metric.

It is often suggested that a lower Day-Night Average Sound Level, such as 60 or 55 dB, be adopted as the threshold of community noise annoyance for airport environmental analysis documents. While there is no technical reason why a lower level cannot be measured or calculated for comparison purposes, a Day-Night Average Sound Level of 65 dB:

1. provides a valid basis for comparing and assessing community noise effects,
2. represents a noise exposure level which is normally dominated by aircraft noise and not other community or nearby highway noise sources, and
3. reflects the FAA's threshold for grant-in-aid funding of airport noise mitigation projects.

The U.S. Department of Housing and Urban Development also established a Day-Night Average Sound Level standard of 65 dB for eligibility for federally guaranteed home loans.

For this environmental study, levels of Day-Night Average Sound Level equal to and greater than 65 dB were used for assessing community noise impact.

C.2.4 Speech Interference

Speech interference associated with aircraft noise is a primary cause of annoyance to individuals on the ground. The disruption of routine activities such as radio or television listening, telephone use, or family conversation gives rise to frustration and agravation. The quality of speech communication is also important in classrooms, offices, and industrial settings and can cause fatigue and vocal strain in those who attempt to communicate over the noise. Research has shown that "whenever intrusive noise exceeds approximately 60 dB indoors, there will be interference with speech communication" (Reference A5).

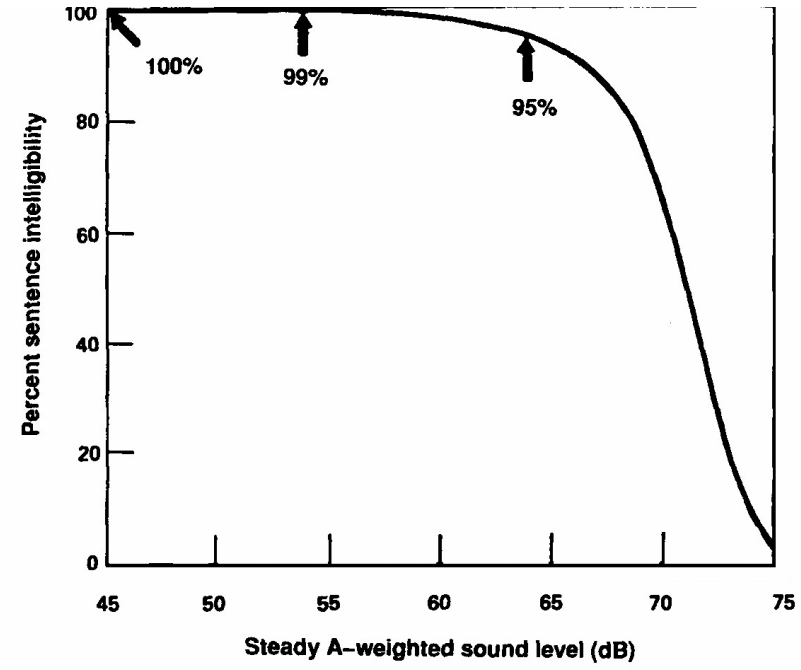


Figure C-3. Normal Voice Sentence Intelligibility as a Function of the Steady Background Sound Level in an Outdoor Situation (Reference A3)

Indoor speech interference, per Reference A3, can be expressed as a percentage of sentence intelligibility among two people speaking in relaxed conversation approximately 1 meter apart

in a typical* living room or bedroom. The percentage of sentence intelligibility is a non-linear function of the (steady) indoor background A-weighted sound level as shown in Figure C-3. Sentence intelligibility is greater than 99 percent for background levels below 54 dB and less than 10 percent for background levels above 73 dB. Note that the function is especially sensitive to changes in sound level between 65 dB and 75 dB. As an example of the sensitivity, a 1 dB increase in background sound level from 70 dB to 71 dB yields a 14 percent decrease in sentence intelligibility.

C.2.5 Sleep Disturbance

Sleep disturbance is another source of annoyance associated with aircraft noise. This is especially true because of the intermittent nature and content of aircraft noise, which is more disturbing than continuous noise of equal energy and neutral meaning.

Sleep disturbance can be measured in either of two ways. "Arousal" represents awakening from sleep, while a change in "sleep stage" represents a shift from one of four sleep stages to another stage of lighter sleep without awakening. In general, arousal requires a higher noise level than does a change in sleep stage.

In terms of average daily noise levels, some guidance is available to judge sleep disturbance. The U.S. Environmental Protection Agency identified an indoor DNL of 45 dB as necessary to protect against sleep interference (Reference A3). Assuming a conservative structural noise insulation of 20 dB for typical dwellings, 45 dB corresponds to an outdoor DNL of 65 dB as minimizing sleep interference.

In June 1997, the Federal Interagency Committee on Aviation Noise (FICAN) reviewed the sleep disturbance issue and presented a sleep disturbance dose-response prediction curve (Reference A15), which was based on data from field studies in References A16 through A19, as the recommended tool for analysis of potential sleep disturbance for residential areas. Figure C-4 shows this curve which, for an indoor Sound Exposure Level of 60 dB, predicts that a maximum of approximately 5 percent of the residential populaton exposed are expected to be behaviourally awakened. FICAN cautions that this curve should only be applied to long-term adult residents.

* "Typical" is defined as a room with about 300 sabins of sound absorption which, according to Reference A3, is representative of living rooms and bedrooms.

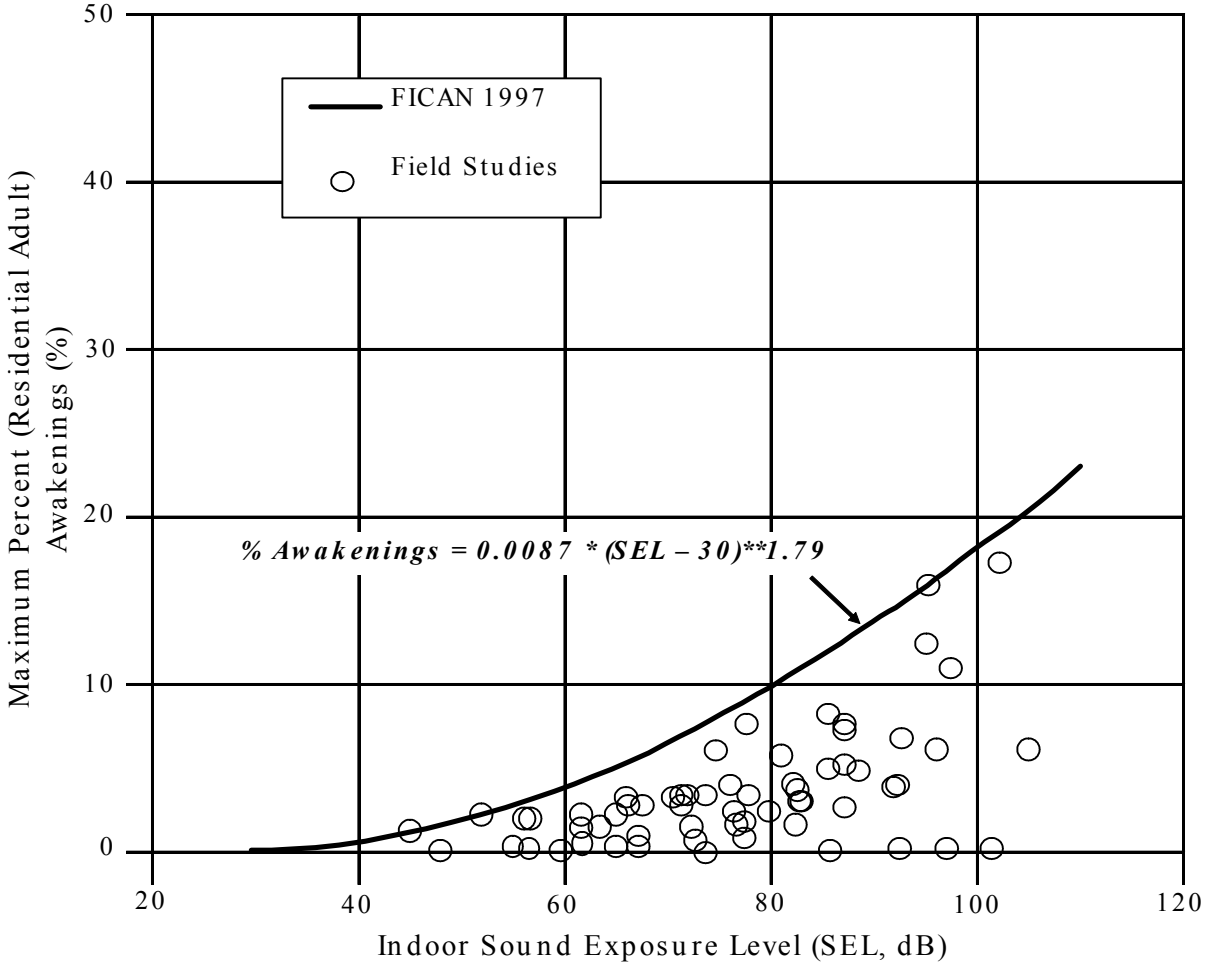


Figure C-4. Sleep-disturbance Dose-response Relationship

C.2.6 Noise Effects on Domestic Animals and Wildlife

Animal species differ greatly in their responses to noise. Each species has adapted, physically and behaviorally, to fill its ecological role in nature, and its hearing ability usually reflects that role. Animals rely on their hearing to avoid predators, obtain food, and communicate with and attract other members of their species. Aircraft noise may mask or interfere with these functions. Secondary effects may include nonauditory effects similar to those exhibited by humans – stress, hypertension, and other nervous disorders. Tertiary effects may include interference with mating and resultant population declines.

There are available many scientific studies regarding the effects of noise on wildlife and some anecdotal reports of wildlife "flight" due to noise. Few of these studies or reports include any reliable measures of the actual noise levels involved.

In the absence of definitive data on the effect of noise on animals, the Committee on Hearing, Bioacoustics, and Biomechanics of the National Research Council has proposed that protective noise criteria for animals be taken to be the same as for humans (Reference A16).

C.2.7 Effects on Noise-Induced Vibration Structures and Humans

The sound from an aircraft overflight travels from the exterior to the interior of the house in one of two ways: through the solid structural elements and directly through the air. Figure C-5 illustrates the sound transmission through a wall constructed with a brick exterior, stud framing, interior finish wall, and absorbent material in the cavity. The sound transmission starts with noise impinging on the wall exterior. Some of this sound energy will be reflected away and some will make the wall vibrate. The vibrating wall radiates sound into the airspace, which in turn sets the interior finish surface vibrating, with some energy lost in the airspace. This surface then radiates sound into the dwelling interior. As the figure shows, vibrational energy also bypasses the air cavity by traveling through the studs and edge connections.

Normally, the most sensitive components of a structure to airborne noise are the windows and, infrequently, the plastered walls and ceilings. An evaluation of the peak sound pressures impinging on the structure is normally sufficient to determine the possibility of damage. In general, at sound levels above 130 dB, there is the possibility of structural damage. While certain frequencies (such as 30 hertz for window breakage) may be of more concern than other frequencies, conservatively, only sounds lasting more than one second above a sound level of 130 dB are potentially damaging to structural components (Reference A20). In terms of average acceleration of wall or ceiling vibration, the thresholds for structural damage (Reference A21) are:

- 0.5 m/s/s – is the threshold of risk of damage to sensitive structures (i.e., ancient monuments, etc.),
- 1.0 m/s/s – is the threshold of risk of damage to normal dwellings (i.e., houses with plaster ceiling and walls).

Noise-induced structural vibration may also cause annoyance to dwelling occupants because of induced secondary vibrations, or "rattle", of objects within the dwelling – hanging pictures, dishes, plaques, and bric-a-brac. Loose window panes may also vibrate noticeably when exposed to high levels of airborne noise, causing homeowners to fear breakage.

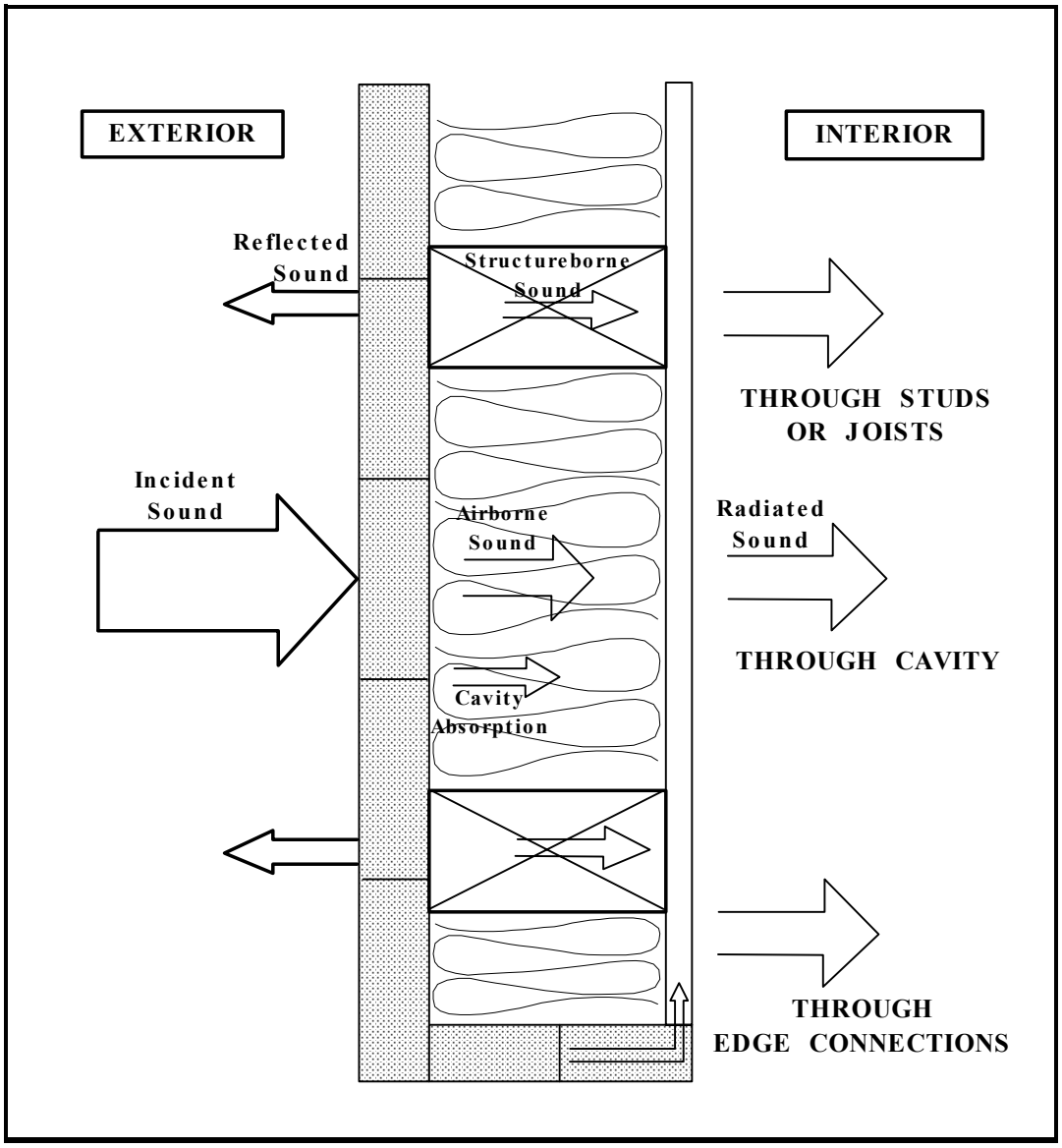


Figure C-5. Pictorial Representation of Sound Transmission Through Built Construction

In general, such noise-induced vibrations occur at sound levels above those considered normally compatible with residential land use. Thus assessments of noise exposure levels for compatible land use should also be protective of noise-induced secondary vibrations.

In the assessment of vibration on humans, the following factors determine if a person will perceive and possibly react to building vibrations:

1. Type of excitation: steady state, intermittent, or impulsive vibration,

2. Frequency of the excitation. ISO 2631-2 (Reference A21) recommends a frequency range of 1 to 80 Hz for the assessment of vibration on humans,
3. Orientation of the body with respect to the vibration,
4. The use of the occupied space (i.e., residential, workshop, hospital), and
5. Time of day.

Table C-1 lists the whole-body vibration criteria from Reference A21 for one-third octave frequency bands from 1 to 80 Hz.

Table C-1.

Vibration Criteria for the Evaluation of Human Exposure to Whole-Body Vibration

Frequency (Hz)	RMS Acceleration (m/s/s)		
	Combined Criteria Base Curve	Residential Night	Residential Day
1	0.0036	0.0050	0.0072
1.25	0.0036	0.0050	0.0072
1.6	0.0036	0.0050	0.0072
2	0.0036	0.0050	0.0072
2.5	0.0037	0.0052	0.0074
3.15	0.0039	0.0054	0.0077
4	0.0041	0.0057	0.0081
5	0.0043	0.0060	0.0086
6.3	0.0046	0.0064	0.0092
8	0.0050	0.0070	0.0100
10	0.0063	0.0088	0.0126
12.5	0.0078	0.0109	0.0156
16	0.0100	0.0140	0.0200
20	0.0125	0.0175	0.0250
25	0.0156	0.0218	0.0312
31.5	0.0197	0.0276	0.0394
40	0.0250	0.0350	0.0500
50	0.0313	0.0438	0.0626
63	0.0394	0.0552	0.0788
80	0.0500	0.0700	0.1000

Source: Reference A21.

C.2.8 Noise Effects on Terrain

It has been suggested that noise levels associated with low-flying aircraft may affect the terrain under the flight path by disturbing fragile soil or snow structures, especially in mountainous areas, causing landslides or avalanches. There are no known instances of such

effects, and it is considered improbable that such effects will result from routine, subsonic aircraft operations.

C.2.9 Noise Effects on Historical and Archaeological Sites

Because of the potential for increased fragility of structural components of historical buildings and other historical sites, aircraft noise may affect such sites more severely than newer, modern structures. Again, there are few scientific studies of such effects to provide guidance for their assessment.

One study involved the measurements of sound levels and structural vibration levels in a superbly restored plantation house, originally built in 1795, and now situated approximately 1,500 feet from the centerline at the departure end of Runway 19L at Washington Dulles International Airport (IAD). These measurements were made in connection with the proposed scheduled operation of the supersonic Concorde airplane at Dulles (Reference A22). There was special concern for the building's windows, since roughly half of the 324 panes were original. No instances of structural damage were found. Interestingly, despite the high levels of noise during Concorde takeoffs, the induced structural vibration levels were actually less than those induced by touring groups and vacuum cleaning.

As noted above for the noise effects of noise-induced vibrations of normal structures, assessments of noise exposure levels for normally compatible land uses should also be protective of historic and archaeological sites.

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